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WATER SUPPLY OUTLOOK FOR OREGON

U. S. DEPT. OF AGRICULTURE
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MAY 22 1967

CURRENT SERIAL RECORDS

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above
in cooperation with other Federal, State and private organizations.

AS OF
APR. 1, 1967

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season as they affect runoff will add to be an effective average. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data or reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

Listed below are water supply outlook reports based on Federal-State-Private Cooperative snow surveys. Those published by the Soil Conservation Service may be obtained from Soil Conservation Service, Room 507, Federal Building, 701 N. W. Glisan, Portland, Oregon 97209.

PUBLISHED BY SOIL CONSERVATION SERVICE

D. A. WILLIAMS, Administrator

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 507, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85205
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	P. O. Box 38, Boise, Idaho 83701
Montana	P. O. Box 855, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4001 Federal Building, Salt Lake City, Utah 84111
Washington	840 Bon Marche Bldg., Spokane, Washington 99206
Wyoming	P. O. Box 340, Casper, Wyoming 82602

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK
for
OREGON
and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

ISSUED
APRIL 8, 1967

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EXPERIMENT STATION

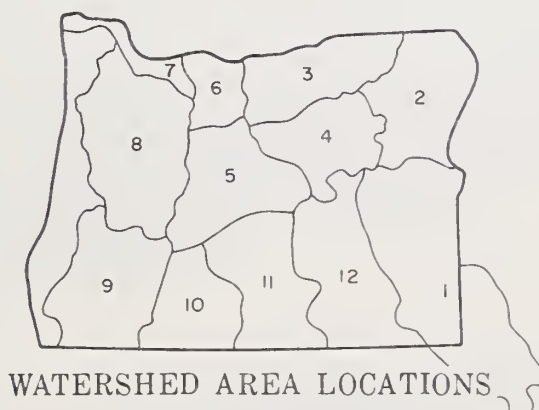
CHRIS L. WHEELER
STATE ENGINEER
STATE OF OREGON

TABLE OF CONTENTS

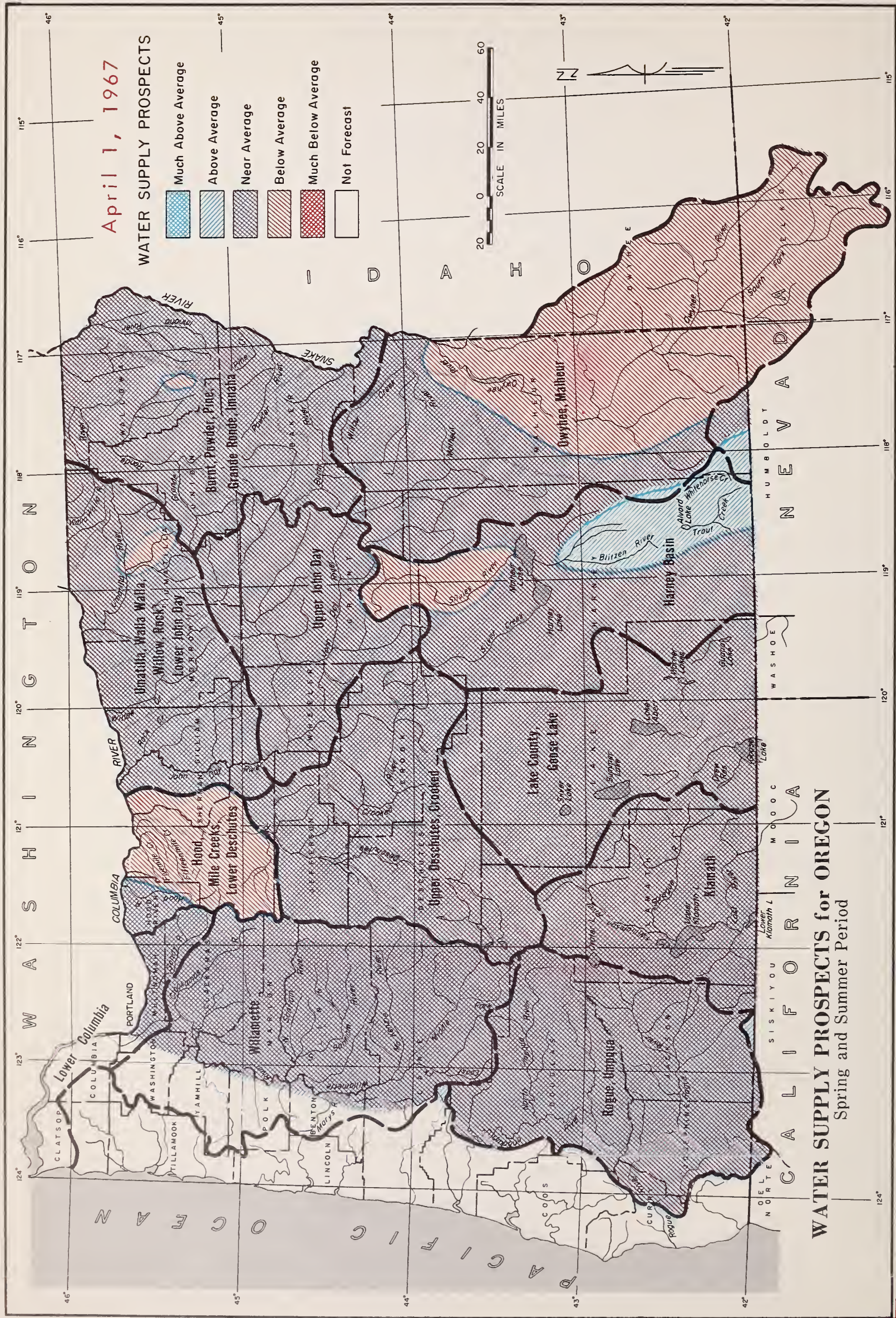
	PAGE
WATER SUPPLY PROSPECTS FOR OREGON.....(MAP).....	FACING PAGE 1
WATER SUPPLY OUTLOOK FOR OREGON.....	1
AUTOMATIC SNOW STATIONS.....	3, 4, 5 AND 6
STORAGE STATUS OF OREGON RESERVOIRS.....(MAP).....	7
MOUNTAIN SOIL MOISTURE IN OREGON.....(MAP).....	8
VALLEY PRECIPITATION IN OREGON.....(MAP AND TABLE).....	9
CURRENT OREGON STREAMFLOW.....(GRAPH).....	10

DETAILED WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS

OWYHEE, MALHEUR.....	AREA 1
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA.....	AREA 2
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY.....	AREA 3
UPPER JOHN DAY.....	AREA 4
UPPER DESCHUTES, CROOKED.....	AREA 5
HOOD, MILE CREEKS, LOWER DESCHUTES.....	AREA 6
LOWER COLUMBIA.....	AREA 7
WILLAMETTE.....	AREA 8
ROGUE, UMPQUA.....	AREA 9
KLAMATH.....	AREA 10
LAKE COUNTY, GOOSE LAKE.....	AREA 11
HARNEY BASIN.....	AREA 12
MAP AND INDEX OF OREGON SNOW COURSES.....(MAP)	
LIST OF COOPERATORS.....	INSIDE BACK COVER



WATERSHED AREA LOCATIONS



WATER SUPPLY OUTLOOK for OREGON

April 1, 1967

Farmers, ranchers and other water users in the south half of the state will have near average water supplies this summer while those in the north half will have mostly below average water conditions. Stored water supplies are satisfactory in most cases and soil moisture is excellent.

PRECIPITATION

Statewide precipitation in March was normal or better in the southcentral part of the state and ranged from 89 percent to 60 percent normal in the northwest half. The Hood River-Wasco area had the least precipitation according to the U. S. Weather Bureau.

SNOW COVER

Water content of the state-wide mountain snowpack on April first is still about 87 percent of the 15-year average (1948-62). Poorest snowpacks are along the Columbia River on the north where snow is about 73 percent average on the Walla Walla, Umatilla, lower John Day and Hood Rivers and the Mile Creeks near The Dalles.

SOIL MOISTURE

Soil moisture in the upper watersheds under the snowpack is much better than usual. Only a very small part of the snow-melt runoff will be absorbed by the soil mantle as runoff begins this spring.

RESERVOIR STORAGE

Water stored in 26 irrigation reservoirs adds up to 2,102,000 acre feet or 97 percent of the usual amount on hand at this date. Last year these reservoirs held 16 percent more water than is now on hand.

Although most Oregon reservoirs contain adequate water for the 1967 season, McKay and Wallowa Lake reservoirs have very low storage this year. Water supplies from McKay will be very deficient but lands served from Wallowa Lake will not be so badly hurt.

STREAMFLOW

Forecasts of streamflow for the spring and summer of 1967 are mostly below the 15-year average (1948-62) with Owyhee River expected to produce only 59 percent of its average flow. The Powder, Silvies, Deschutes, Rogue, South Santiam and White Rivers are forecast to flow 75 to 78 percent average.

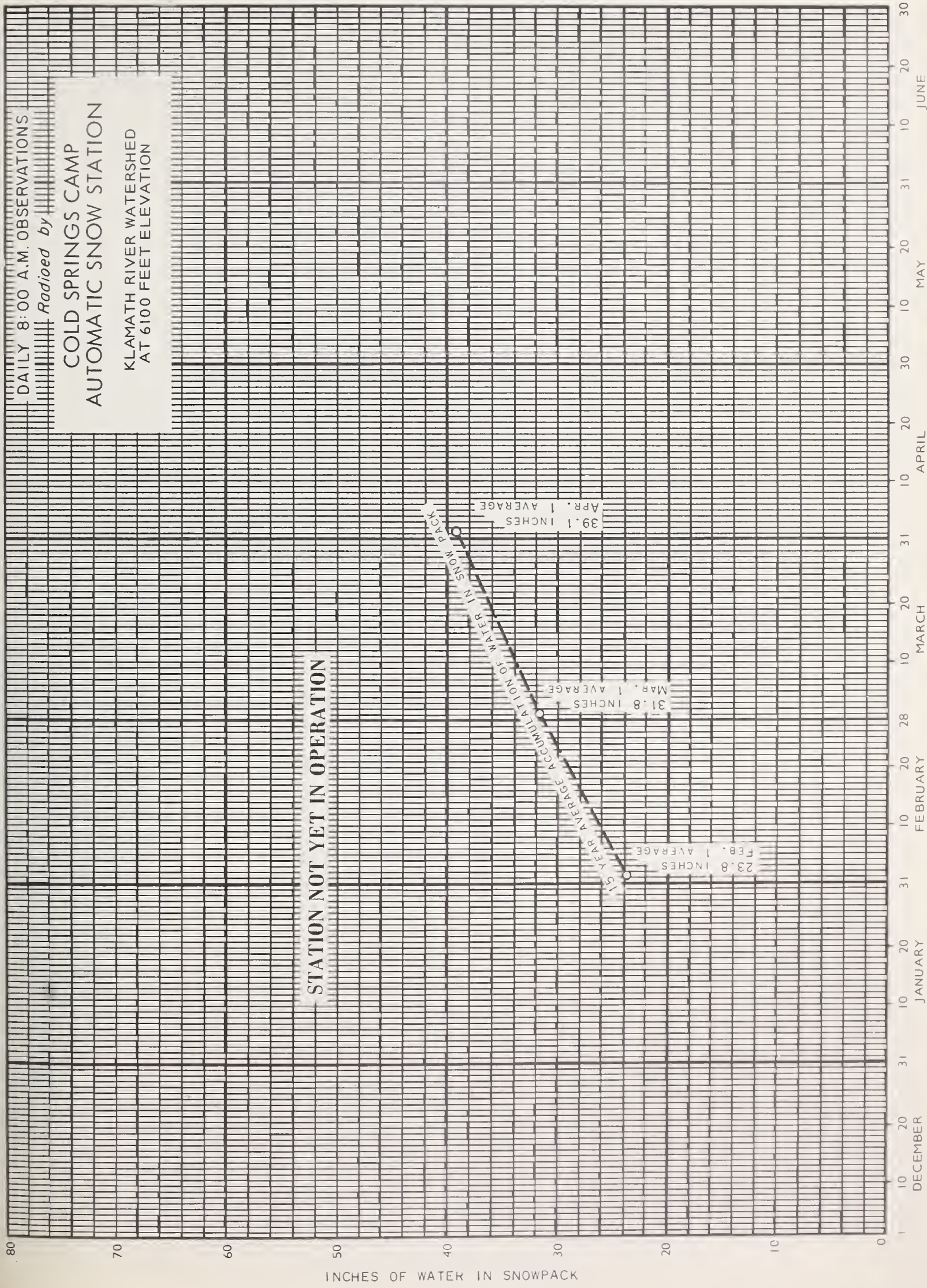
continued --

Other streams are forecast in the 80 to 96 percent bracket except in the Klamath, Lake county, southern Harney and Wallowa areas where flows are predicted from 100 to 119 percent average.

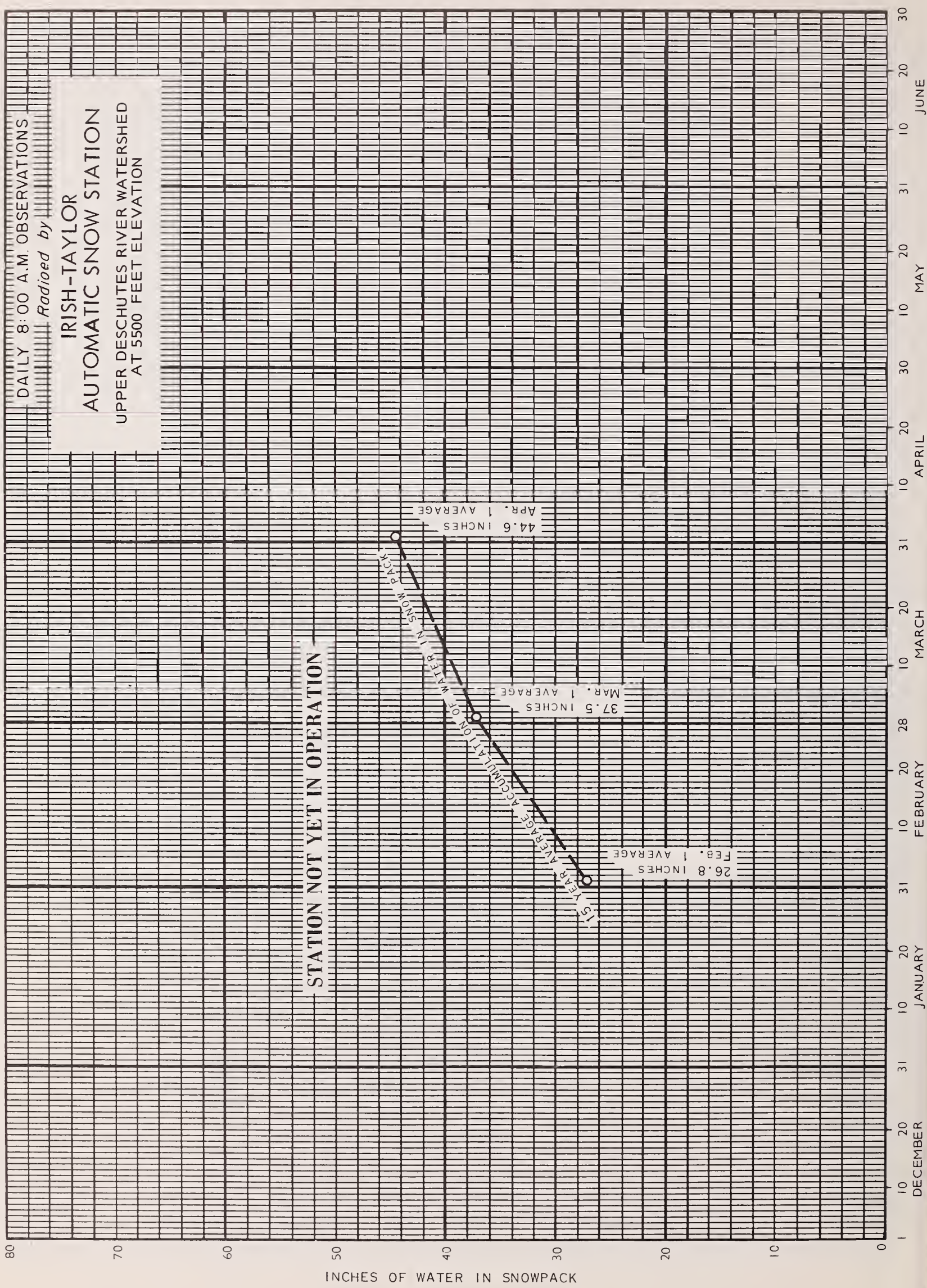
These forecasts assume near average conditions of precipitation and temperature during the forecast periods.

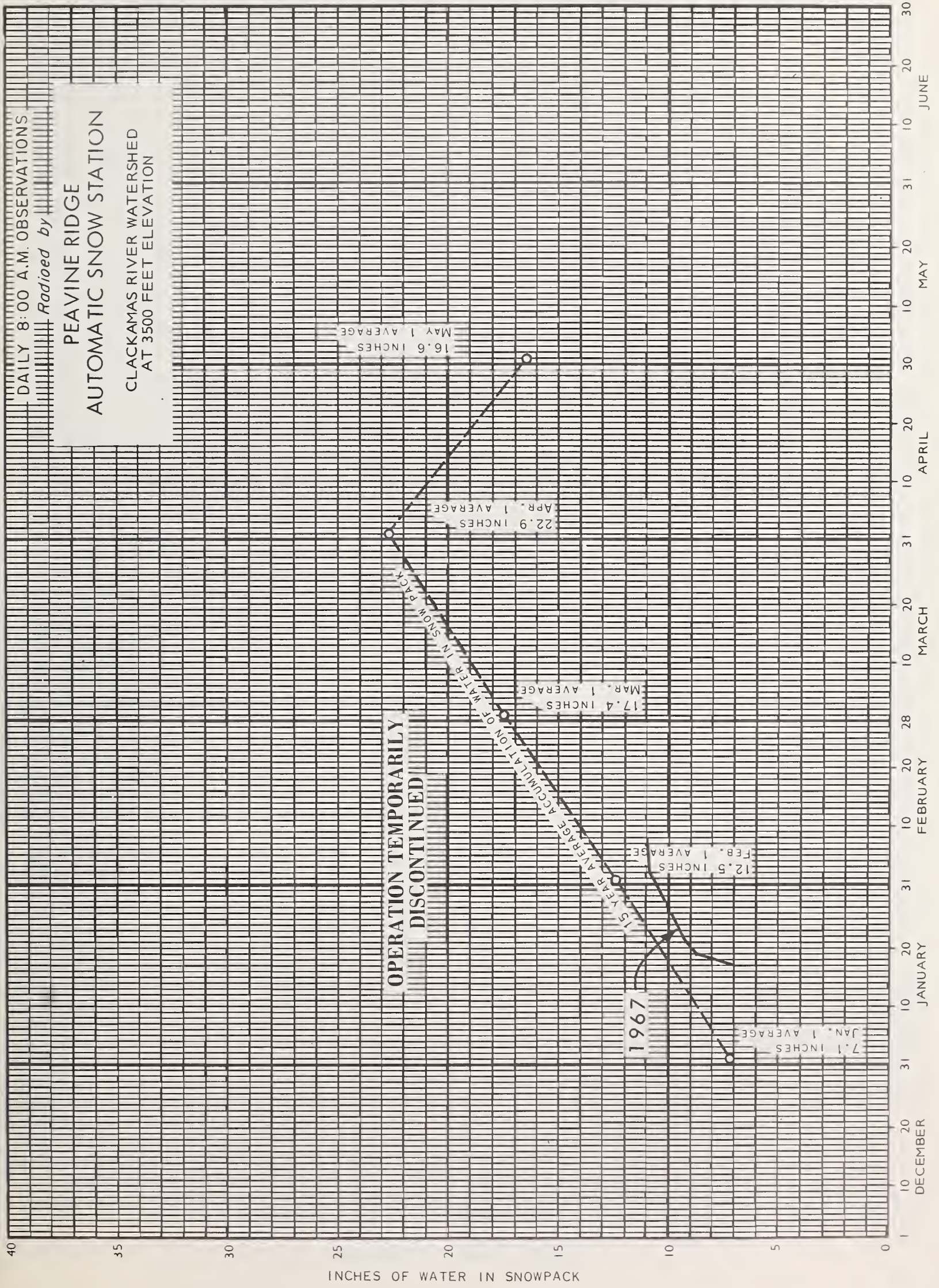


U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION



U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION





U.S.D.A. SOIL CONSERVATION SERVICE DAILY RADIO REPORTS BY AUTOMATIC SNOW MEASURING STATION

DAILY 8:00 A.M. OBSERVATIONS

Radioed by

WILLAMETTE PASS AUTOMATIC SNOW STATION

MIDDLE FORK WILLAMETTE RIVER WATERSHED
AT 5600 FEET ELEVATION

STATION NOT YET IN OPERATION

INCHES OF WATER IN SNOWPACK

INCHES OF WATER IN SNOWPACK

MAY 1 AVERAGE
45.4 INCHES

APR. 1 AVERAGE
46.3 INCHES

MAR. 1 AVERAGE
37.7 INCHES

FEB. 1 AVERAGE
28.5 INCHES

15 YEAR
AVERAGE

JUNE

MAY

APRIL

MARCH

FEBRUARY

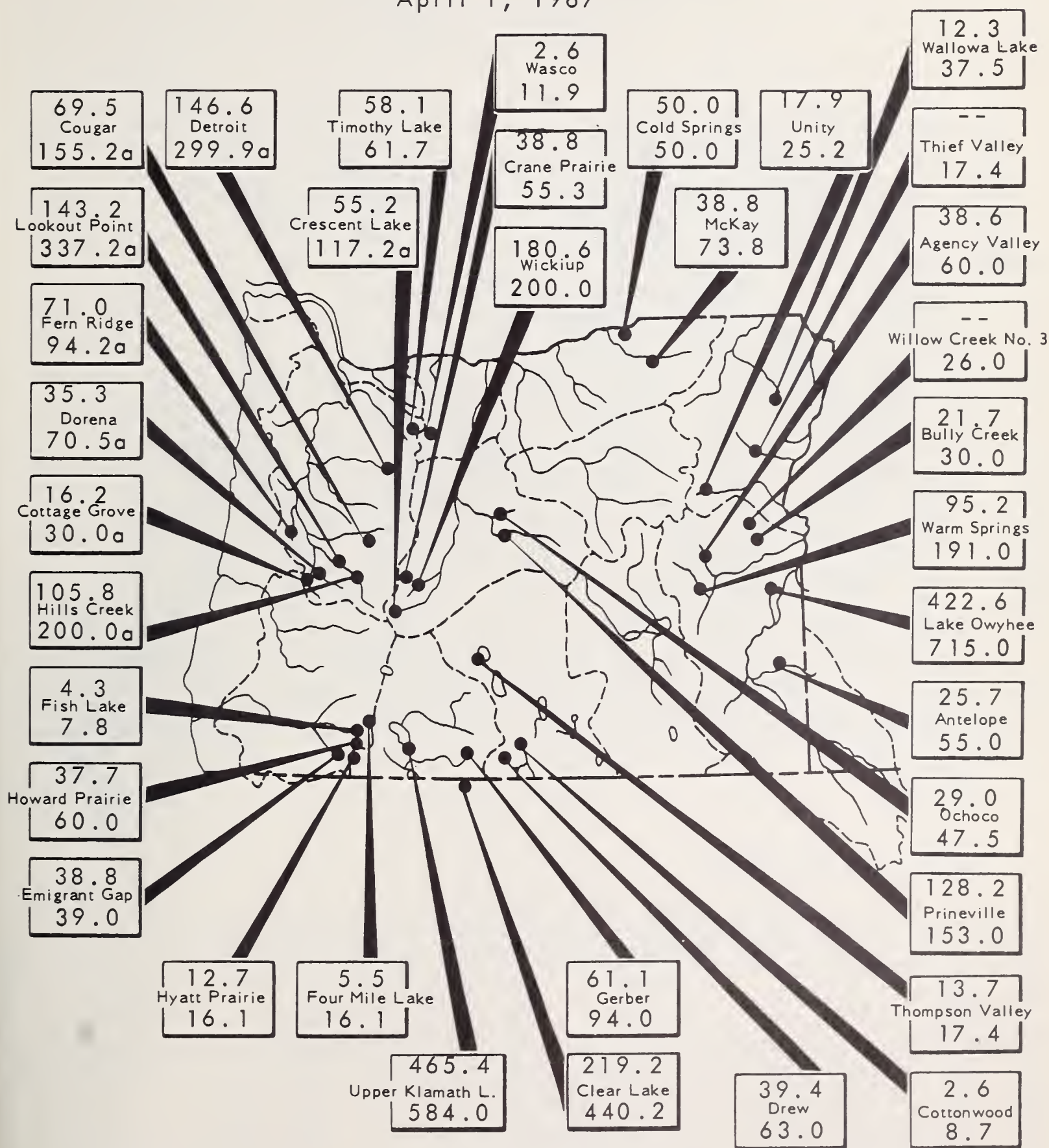
JANUARY

DECEMBER

STORAGE STATUS of OREGON RESERVOIRS

usable contents in thousands of acre feet

April 1, 1967



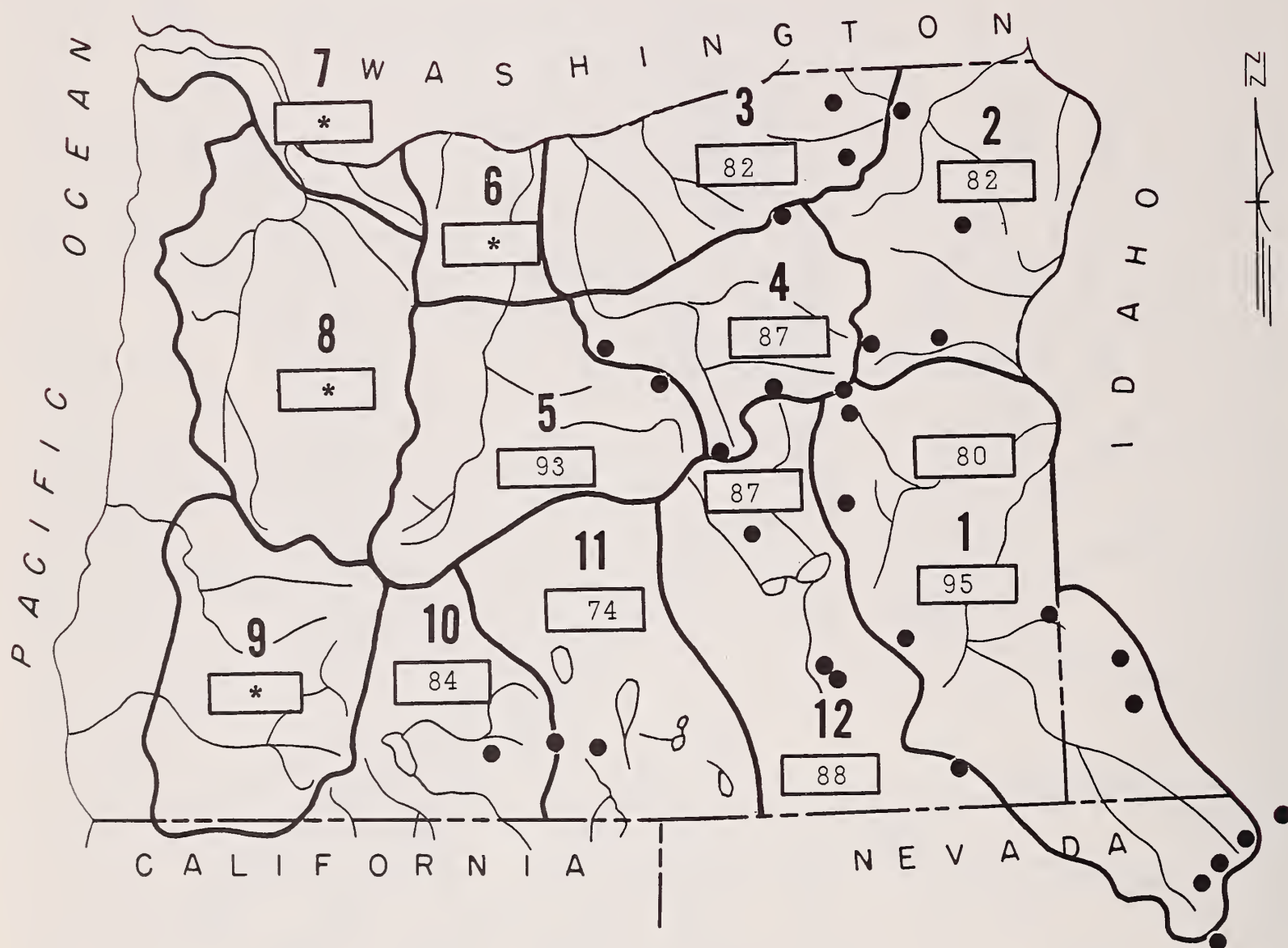
EXPLANATION

687.0	---	Contents
Lake Owyhee		
715.0	---	Capacity

(a) Multiple purpose reservoir - space reserved for flood runoff.
N. R. - No report.

MOUNTAIN SOIL MOISTURE in OREGON as percent of capacity

April 1, 1967



● Soil Moisture Station

*Moisture studies not yet developed in these areas.

VALLEY PRECIPITATION in OREGON ^a

April 1, 1967



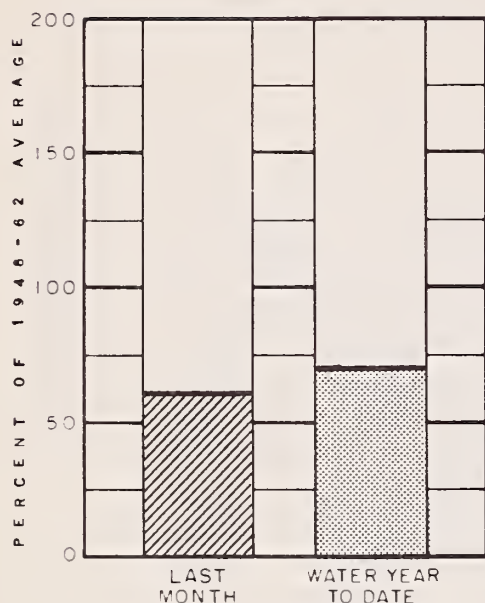
PRECIPITATION as PERCENT of the 1948-62 AVERAGE

STATION	LAST MONTH	WATER YEAR TO DATE ^b	STATION	LAST MONTH	WATER YEAR TO DATE ^b
BAKER APT.	153	112	LAKEVIEW	112	115
BEND	70	94	MEACHAM	73	122
BURNS	207	124	MEDFORD APT.	107	113
ENTERPRISE	174	100	NYSSA	79	87
EUGENE APT.	59	97	PENDLETON APT.	72	100
HEPPNER	99	109	PORTLAND APT.	106	93
JOHN DAY	109	101	SALEM APT.	79	64
KLAMATH FALLS APT.	132	96	THE DALLES	59	71
			OWYHEE (NEV.)	75	77

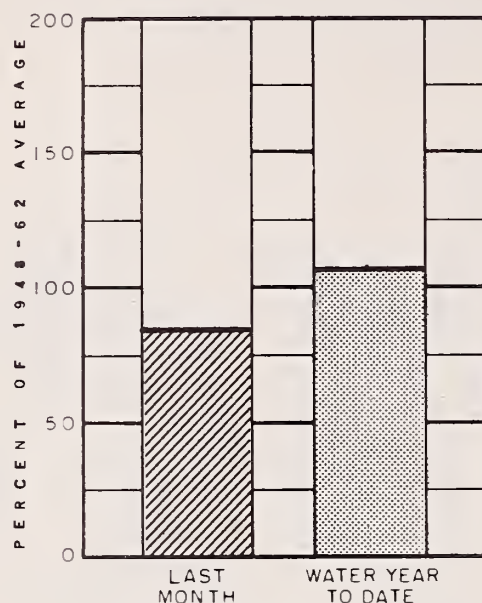
(a) Preliminary data furnished by the U.S. Weather Bureau. (b) Oct. 1 to date. (c) Report delayed.

CURRENT OREGON STREAMFLOW

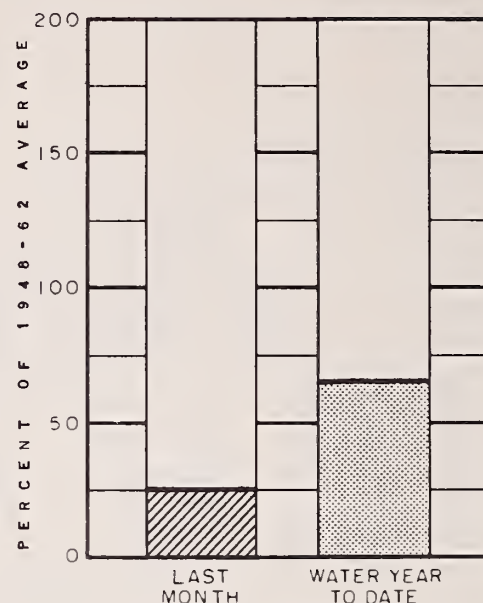
April 1, 1967



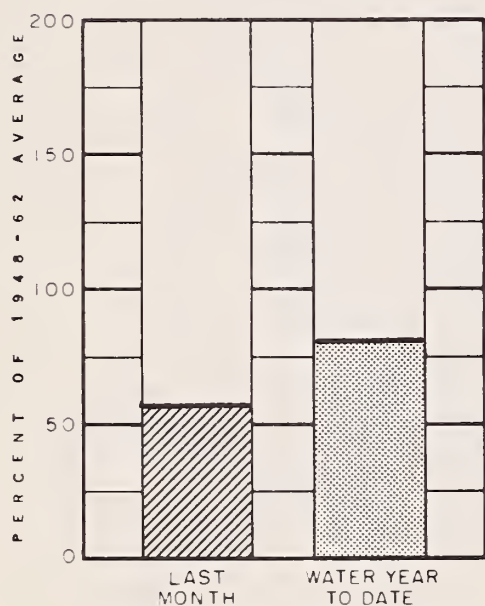
Owyhee Lake net inflow



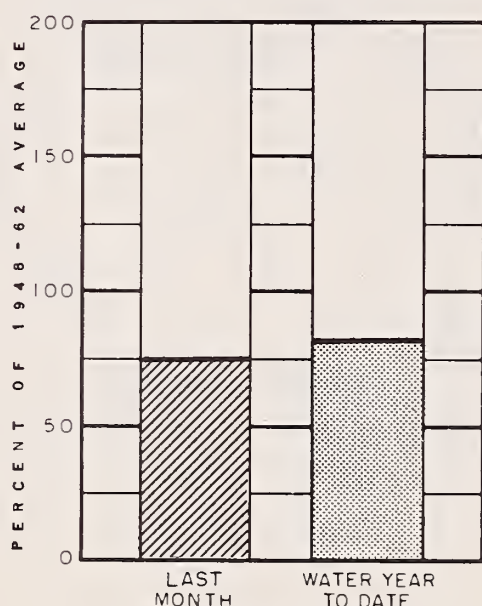
Grande Ronde at La Grande



Umatilla at Pendleton



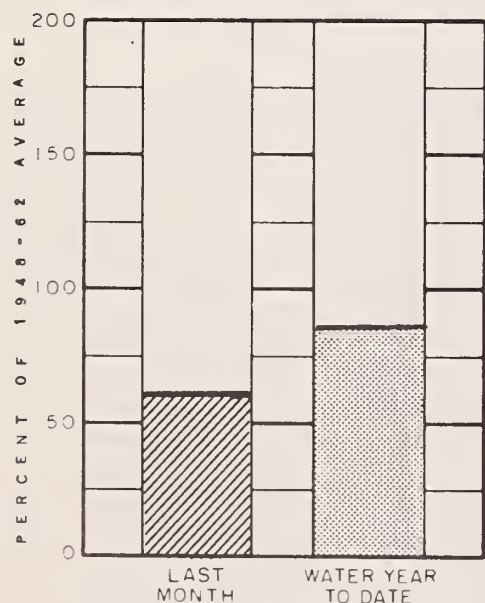
John Day at Service Creek



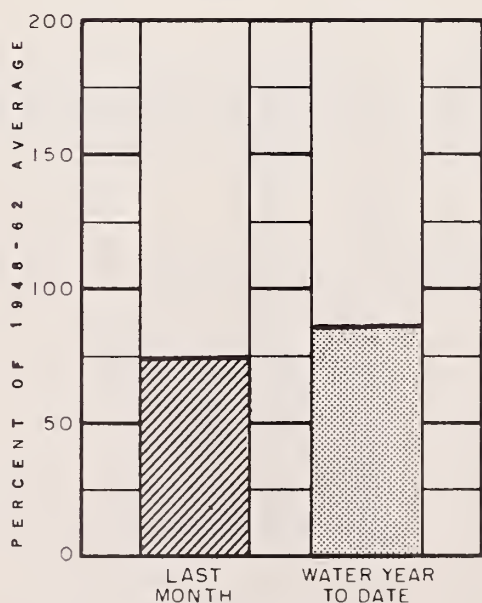
Deschutes at Moody



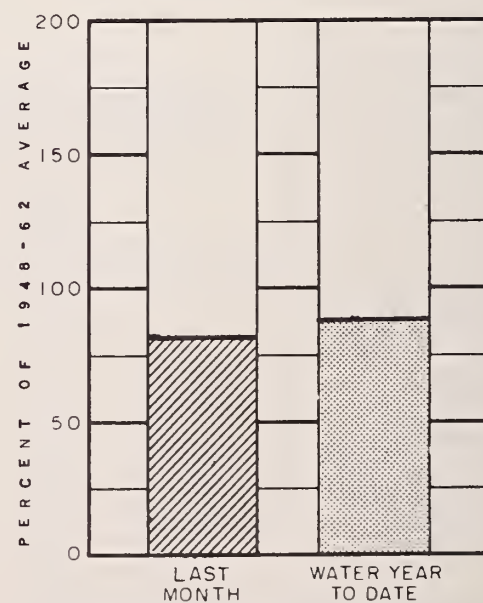
Mid. Fk. Willamette below No. Fk.



Umpqua near Elkton



Rogue at Raygold



Upper Klamath Lake net inflow

Data furnished by U.S. Geological Survey; The Pacific Power and Light Co.; and North and South Boards of Control Owyhee Project.



WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

as of

April 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users of Malheur county can expect average water supplies this spring and summer. Although flow of major streams is forecast between 72 and 89 percent of average the stored water supplies now on hand will again save the day for many water users. Some irrigators, dependent on natural flow of streams heading in low-elevation watersheds, will have only fair water supplies.

SNOW COVER

Mountain snowpacks failed to increase during March except at a few scattered high elevations. Water content of the snow is about 82 percent of the 15-year average (1948-62) as of April first. A year ago the snowpack held about 20 percent less water than this year.

SOIL MOISTURE

Snow-melt runoff will be favored by wetter than usual soils in the upper watersheds under the snowpack. Soil moisture in the Malheur is now about 80 percent of capacity and in the Owyhee watershed it is about 87 percent.

RESERVOIR STORAGE

Reservoired water supplies on Lake Owyhee are 422,600 acre feet on April first compared with 648,000 acre feet a year ago. Carryover water supplies for 1968 are likely to be small this season.

Antelope Reservoir, serving the Jordan Valley Irrigation District, now holds 25,700 acre feet compared with 16,500 acre feet a year ago. The 1967 season should be improved over last year's operations.

Total storage in Warmsprings, Agency Valley and Bully Creek reservoirs was 155,500 acre feet on April first compared with 227,200 acre feet a year ago. Coupled with streamflow still to come, this stored water will provide a sufficient supply for the Vale-Oregon and Warmsprings Irrigation Districts.

STREAMFLOW

Flow of Malheur River near Drewsey is forecast at 65,000 acre feet or 81 percent of the 15-year average April through July. The North Fork at Beulah is forecast at 51,000 acre feet or 87 percent average for the same four month period. Flow of Bully Creek is expected to be only fair.

Inflow to Lake Owyhee is forecast at 210,000 acre feet or 58 percent average for the period April through July. Jordan Creek, in the upper Owyhee, is forecast at 71,000 acre feet or 72 percent for the same four months.

These forecasts assume near average conditions of precipitation and temperature will prevail during the forecast periods.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Boulder Creek	Average	Fair
Bully Creek	Fair	Fair
Cow Creek	Average	Fair
Jordan Creek	Average	Fair
Jordan Valley Irrig. Dist.	Average	Average
McDermitt Creek	Average	Average
Oregon Canyon Creek	Average	Average
Owyhee Project	Average	Average
Succor Creek	Average	Average
Tenmile Creek	Average	Average
Vale-Oregon Irrig. Dist.	Average	Average
Warm Springs Irrig. Dist.	Average	Average
Willow Creek (Reservoired)	Average	Fair

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Agency Valley	60.0	38.6	38.5	41.4
Antelope	55.0	25.7	16.5	19.6
Bully Creek	30.0	21.7	22.7	- -
Lake Owyhee	715.0	422.6	648.2	483.4
Warm Springs	191.0	95.2	166.0	99.1
Willow Creek #3	26.0	b	- -	- -

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
1780	Jordan Creek above Lone Tree Creek	71	April-July	98	72
2140	Malheur near Drewsey	65	April-July	80	81
		67	April-Sept.	82	82
2175	Malheur, North Fork at Beulah ^d	51	April-July	59	87
		58	April-Sept.	65	89
1825	Owyhee Reservoir net Inflow ^k	210	April-July	364	58
		225	April-Sept.	381	59

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Bear Creek (Nev.)	7800	72	16.8	3-30-67	10.1	12.1	14.4
Big Bend (Nev.)	6700	48	16.7	3-27-67	15.6	15.4	16.4
Blue Mountain Springs	5900	42	16.9	3-31-67	11.8	8.8	12.3
Crane Prairie	5375	48	18.2	3-31-67	16.4	15.2	17.9
Folly Farm	4450	30	12.5	b			
Jack Creek, Lower (Nev.)	6800	48	8.6	3-31-67	8.3	- -	8.3
Jordan Valley	4390	48	19.3	b			
Mud Flat (Ida.)	5500	48	12.8	3-28-67	14.4	14.4	14.1
Rodeo Flat (Nev.)	6800	42	11.0	3-27-67	10.6	10.6	10.9
Stinking Water Summit	4800	48	21.9	b			
Taylor Canyon	6200	48	15.1	3-31-67	14.7	12.4 ^f	15.0
Triangle (Ida.)	5150	48	16.6	b			

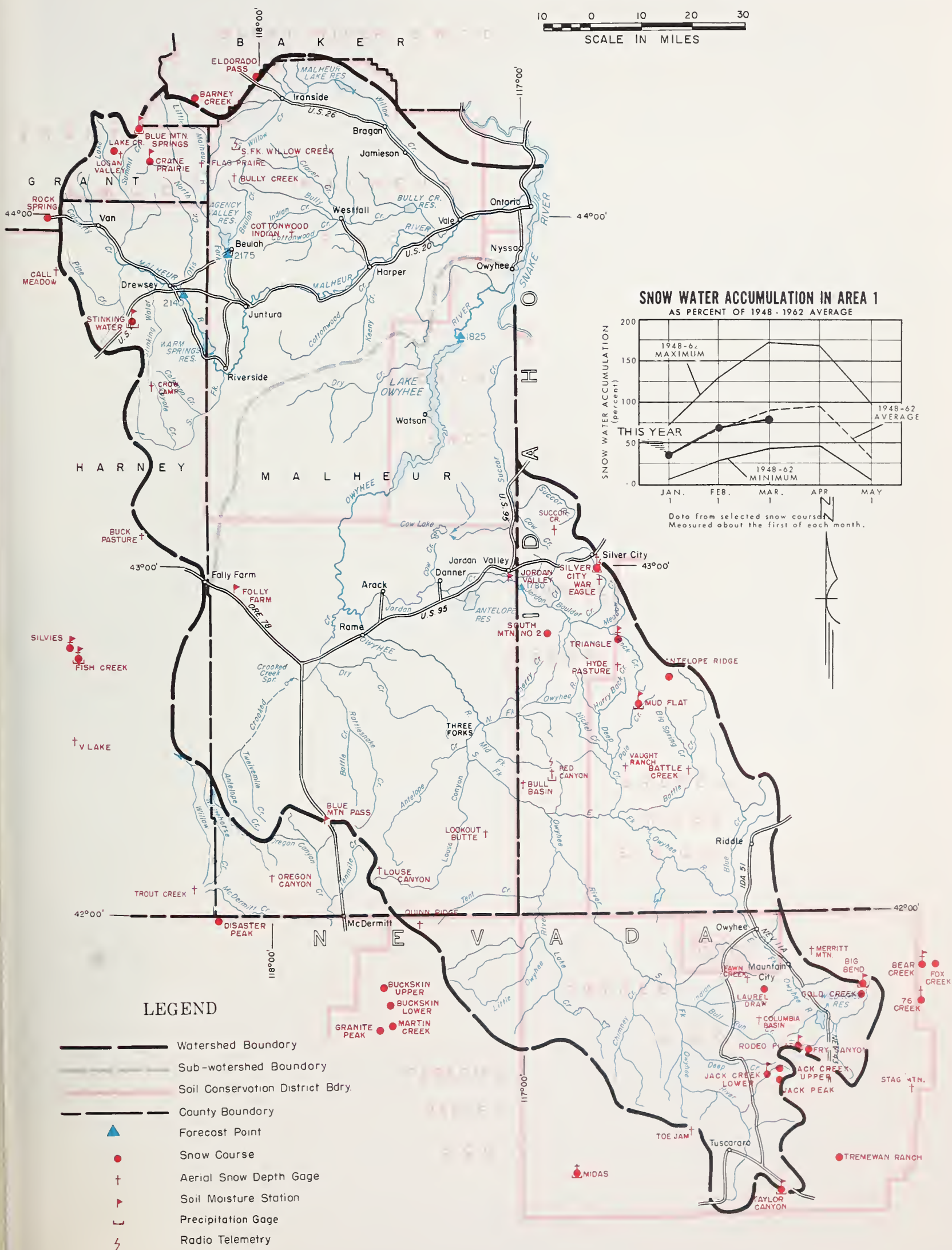
SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Antelope Ridge (Ida.)	5900	3/28	16	4.9	0.0	- -
Barney Creek	5950	3/30	34	8.8	7.8	8.7
Battle Creek (Ida.)	5700	b				
Bear Creek (Nev.)	7800	3/30	62	20.1	16.5	21.0
Big Bend (Nev.)	6700	3/27	18	6.1	5.7	10.7
Blue Mountain Springs	5900	3/31	54	16.4	10.6	17.3
Buck Pasture	5700	b				
Buckskin, Lower (Nev.)	6700	3/27	16	5.9	6.5	9.2 ^h
Buckskin, Upper (Nev.)	7200	3/27	23	8.1	10.6	10.3 ^h
Bull Basin (Ida.)	5600	b				
Bully Creek	5300	b				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (l) Ground measurement. (m) Average for 5 or more years in base period.

OWYHEE, MALHEUR WATERSHEDS

10 0 10 20 30
SCALE IN MILES



Owyhee, Malheur Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
					LAST YEAR	1948-62 AVERAGE
NAME	ELEVATION					
Call Meadow	5340	b				
Columbia Basin (Nev.)	6650	b				
Cottonwood-Indian	4320	b				
Crane Prairie	5375	3/31	36	9.6	5.5	10.9
Crow Camp	5500	b				
Disaster Peak (Nev.)	6500	3/29	30	10.6	2.4	11.7 ^h
Eldorado Pass	4600	3/30	0	0.0	0.0	0.6 ^h
Fawn Creek (Nev.)	7000	b				
Fish Creek	7900	4/3	74	26.6	17.9	26.9
Flag Prairie	4750	b				
Fox Creek (Nev.)	6800	b				
Fry Canyon (Nev.)	6700	3/27	17	5.9	6.0	8.9
Gold Creek (Nev.)	6600	3/27	6	2.2	2.7	6.5
Granite Peak (Nev.)	7800	3/28	41	15.6	9.4	12.5 ^h
Hyde Pasture (Ida.)	5800	b				
Jack Creek, Lower (Nev.)	6800	3/30	6	0.7	T	3.5
Jack Creek, Upper (Nev.)	7250	3/30	30	8.2	7.7	11.6 ^h
Jack Peak (Nev.)	8420	3/30	79	25.6	23.6	27.5
Lake Creek	5120	3/31	36	10.1	6.5	11.2 ^h
Laurel Draw (Nev.)	6700	3/30	22	4.5	5.0	9.5
Logan Valley	5100	b				
Lookout Butte	5650	b				
Louse Canyon	6440	b				
Martin Creek (Nev.)	6700	3/27	33	12.3	7.0	8.8 ^h
Merritt Mountain (Nev.)	7000	b				
Midas (Nev.)	7200	3/31	5	1.1	0.0	1.9 ^h
Mud Flat (Ida.)	5500	3/28	10	3.1	1.4	4.5 ^h
Oregon Canyon	6950	b				
Quinn Ridge (Nev.)	6300	b				
Red Canyon (Ida.)	6500	b				
Rock Spring	5100	3/31	21	5.0	4.4	5.2
Rodeo Flat (Nev.)	6800	3/27	12	4.1	4.9	8.2
76 Creek ^e (Nev.)	7100	4/1	21	6.9	7.3	14.5 ^h
Silver City (Ida.)	6400	3/28	39	14.6	10.9	16.3 ^h
Silvies	6900	4/1	43	16.4	7.5	14.0 ^h
South Mountain #2 (Ida.)	6340	3/29	33	10.5	4.9	13.2 ^h
Stag Mountain (Nev.)	7800	b				
Stinking Water	4800	3/30	T	T	0.0	0.9 ^h
Succor Creek (Ida.)	6100	b				
Taylor Canyon (Nev.)	6200	3/30	10	3.4	1.9	3.7
Toe Jam (Nev.)	7700	b				
Tremewan Ranch (Nev.)	5700	3/27	0	0.0	0.0	0.7
Triangle (Ida.)	5150	b				
Trout Creek	7800	b				
"V" Lake	6600	b				
Vaught Ranch (Ida.)	5950	b				
War Eagle (Ida.)	7700	b				



WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

as of
April 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Slightly below average water supplies can be expected this spring and summer by ranchers, farmers and other water users in Baker, Union and Wallowa counties. Although snowfall in March was nearly average the shortage of snow on March 1 has not been eliminated.

SNOW COVER

Water content of the mountain snowpack is about 92 percent of the April first average and about 20 percent greater than last year at this time. Snow does not usually increase after April first except at the highest elevations. Therefore the amount of snow-melt water that will be available for streamflow next summer is pretty much known now.

SOIL MOISTURE

Watershed soils under the mountain snowpack contain about 2 inches more moisture in the top four feet of soil mantle than last year on April first. This additional moisture will favor runoff from snow-melt and precipitation this year.

RESERVOIR STORAGE

Stored water in Wallowa Lake is only 12,300 acre feet allowing for some 5000 acre feet of storage space taken up by sediment. This low level of storage is poorer than the 1955 conditions but expected streamflow in the next six months is 10 percent above average.

Unity reservoir now contains 17,900 acre feet which is well above average and only slightly below the 19,600 a.f. held last year.

STREAMFLOW

Flow of Burnt River into Unity reservoir is forecast at 32,000 acre feet or 82 percent of the 15 year average (1948-62) for the 3-month period April through June. Unity reservoir should fill.

Powder River is forecast to flow 48,000 acre feet or 73 percent average April through July. Late season water supplies will be only fair.

The main Grande Ronde, as measured at La Grande, is forecast to flow 172,000 acre feet or 85 percent average April through July. Some water users will experience late season shortages.

Catherine Creek is forecast to flow 75,000 acre feet or 103 percent average April through September. This will be a tight water supply for some water users.

Wallowa River tributaries and the Imnaha River will produce average flows or better this year.

These forecasts assume that near average conditions of precipitation and temperature will prevail in the forecast period.

Report prepared by
W.T. FROST AND TOM GEORGE
U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE
1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Alder Slope	Average	Average
Baker Valley	Average	Fair
Big Creek	Average	Average
Clover Cr. (nr. N. Powder)	Average	Fair
Cove	Average	Average
Durkee	Average	Fair
Eagle Valley	Average	Average
Elgin	Average	Fair
Enterprise-Joseph	Average	Average
Hereford-Bridgeport	Average	Average
Imnaha River	Average	Average
LaGrande-Island City	Average	Fair
Lostine-Wallowa	Average	Average
No. Powder River-Wolf Cr.	Average	Average
Pine Valley	Average	Average
Powder River-Elk Creek	Average	Fair
Summerville	Average	Fair
Sumpter Valley	Average	Fair
Union-Hot Lake	Average	Average
Unity	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Thief Valley	17.4	b	- -	- -
Unity	25.2	17.9	19.6	14.1
Wallowa Lake	37.5	12.3	32.9	18.2

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1967

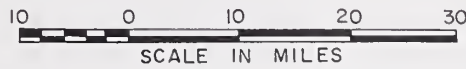
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
3305	Bear near Wallowa	74	April-Sept.	72	103
2730	Burnt near Hereford ^d	32	April-June	39	82
		34	April-Sept.	41	83
3200	Catherine near Union	75	April-Sept.	73	103
3190	Grande Ronde at LaGrande	172	April-July	202	85
		174	April-Sept.	203	86
3295	Hurricane near Joseph	48	April-Sept.	48	100
2920	Imnaha at Imnaha	376	April-Sept.	318	118
3300	Lostine near Lostine	150	April-Sept.	131	114
2755	Powder near Baker	48	April-July	66	73
		50	April-Sept.	67	75
3250	Wallowa, East Fork near Joseph ^d	10.7	April-July	9.7	110
		13.2	April-Sept.	12.0	110

SOIL MOISTURE

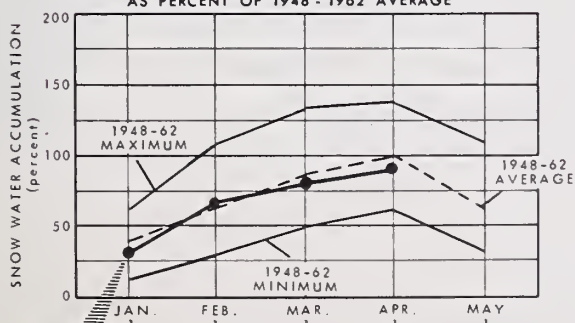
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Blue Mountain Summit	5100	36	16.8	3-30-67	12.3	9.9	15.6
Emigrant Springs	3925	48	22.3	3-28-67	20.1	18.3	20.9
Tollgate	5070	48	23.6	3-29-67	18.8	18.3	18.9

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 2
AS PERCENT OF 1948-1962 AVERAGE



THIS YEAR Data from selected snow courses.
Measured about the first of each month.

LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Boundary
- County Boundary
- ▲ Forecast Point
- Snow Course
- ✚ Soil Moisture Station
- ✚ Aerial Snow Depth Gauge
- ✚ Precipitation Gauge

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Aneroid Lake #1	7480	4/2	115	45.2	32.0	38.9 ^h
Aneroid Lake #2	7300	4/2	99	37.4	27.0	34.6
Anthony Lake	7125	3/31	86	29.8	23.0	28.9
Anthony Ski Hill		b				
Bald Mountain ^e (Ore.)	6700	4/2	63	22.7	16.8	- -
Barney Creek	5950	3/30	34	8.8	7.8	8.7
Beaver Reservoir	5340	3/27	35	10.2	10.1	12.8
Big Sheep ^e	6200	4/2	85	32.3	17.6	- -
Blue Mountain Summit	5098	3/30	24	7.4	6.2	8.6
Bourne	5800	3/29	39	12.2	12.6	16.3
County Line	4800	3/30	15	4.3	5.6	7.6
Dooley Mountain	5430	3/27	24	8.3	5.0	9.3
Eilertson Meadows	5400	3/28	33	11.9	13.0	12.2
Eldorado Pass	4600	3/30	0	0.0	0.0	0.6 ^h
Gold Center	5340	3/29	36	11.1	13.2	13.7
Goodrich Lake	6775	3/30	97	38.1	33.4	38.8 ^h
Intake House	4930	3/28	34	10.0	11.3	- -
Little Alps	6200	3/31	54	15.4	14.1	- -
Little Antone	5000	3/31	21	6.3	4.5	- -
Lucky Strike	5050	3/28	36	12.3	11.7	14.6 ^h
Meacham	4300	3/28	21	7.7	9.8	9.5
Mirror Lake ^e	8200	4/2	149	72.0	49.0	- -
Moss Springs	5850	4/2	74	26.6	16.4	26.2
Power Plant	3990	3/28	7	2.8	4.5	- -
Schneider Meadows	5400	3/29	87	29.6	24.6	32.4
Schoolmarm	4775	3/30	13	3.8	5.0	5.2 ^h
Standley	7400	4/2	96	37.0	18.0	- -
Taylor Green	5740	4/2	52	17.4	11.2	18.8
Tipton	5100	3/30	27	9.1	7.2	11.0 ^h
Tollgate	5070	3/29	65	24.2	26.9	29.9
TV Ridge	7000	4/2	73	26.0	16.0	- -

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

Area 3

OREGON

as of

April 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Farmers, ranchers and other water users in the Umatilla, Morrow and Gilliam county area can expect slightly below average water supplies in the spring season and only fair supplies for late season. Stored water in McKay reservoir is very deficient while Coldsprings reservoir is full.

SNOW COVER

Deficient precipitation during March brought less than the usual increase in the snow cover. Water content of mountain snowpack is now about 73 percent of the 15-year average (1948-62) for the first of April. Snow at middle elevations is far below average while at low elevations the snow is completely gone.

SOIL MOISTURE

Moisture in the soil mantle under the snowpack is up to 82 percent of capacity. This moisture will favor snow-melt runoff.

RESERVOIR STORAGE

McKay reservoir contained 38,800 acre feet on April first compared with 36,700 acre feet a year ago. This is much better than the low amount of 22,120 acre feet on hand at this date in 1964.

STREAMFLOW

Inflow to McKay reservoir in the period April through September is forecast at 28,000 acre feet or 88 percent of the 15-year average (1948-62). With the 38,800 acre feet now in storage the total available from the McKay source probably will be about 67,000 acre feet.

Flow of the Umatilla at Pendleton is forecast at 160,000 acre feet or 87 percent average for the next six months. This flow should satisfy most water needs.

Flow of Butter Creek is forecast at 8,400 acre feet or 86 percent average for the next four months through July. Late season shortages will be experienced.

Flow of the South Fork of Walla Walla is forecast at 67,000 acre feet or 88 percent average. Late season shortages are indicated for users from this stream.

Other streams in the Umatilla-Walla Walla area will provide only fair water supplies this season.

These forecasts assume that near average conditions of precipitation and temperature will prevail during the forecast periods.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1967

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Walla Walla River, No. Fk.	Average	Fair
Walla Walla River, So. Fk.	Average	Fair
Walla Walla River, Main	Average	Fair
Walla Walla River, Little	Average	Fair
Couse Creek	Fair	Fair
Dry Creek	Fair	Fair
Pine Creek	Fair	Fair
Umatilla River, Main	Average	Average
Wildhorse Creek	Fair	Fair
Umatilla R. (Cold Springs Reservoir)	Average	Average
Umatilla R. (McKay Res.)	Average	Fair
McKay Creek	Fair	Fair
Birch Creek	Fair	Fair
Butter Creek	Average	Fair
Willow Creek	Fair	Fair
Rhea Creek	Fair	Fair
Rock Cr. (John Day tributary)	Fair	Fair

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cold Springs	50.0	50.0	49.2	48.1
McKay	73.8	38.8	36.7	54.0

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
0320	Butter Creek near Pine City	8.4	April-July	9.8	86
0225	McKay near Pilot Rock	28	April-Sept.	32	88
0200	Umatilla near Gibbon	77	April-July	88	87
		82	April-Sept.	93	88
0210	Umatilla at Pendleton	153	April-July	178	86
		160	April-Sept.	183	87
0100	Walla Walla, South Fork near Milton	54	April-July	62	87
		67	April-Sept.	76	88

SOIL MOISTURE

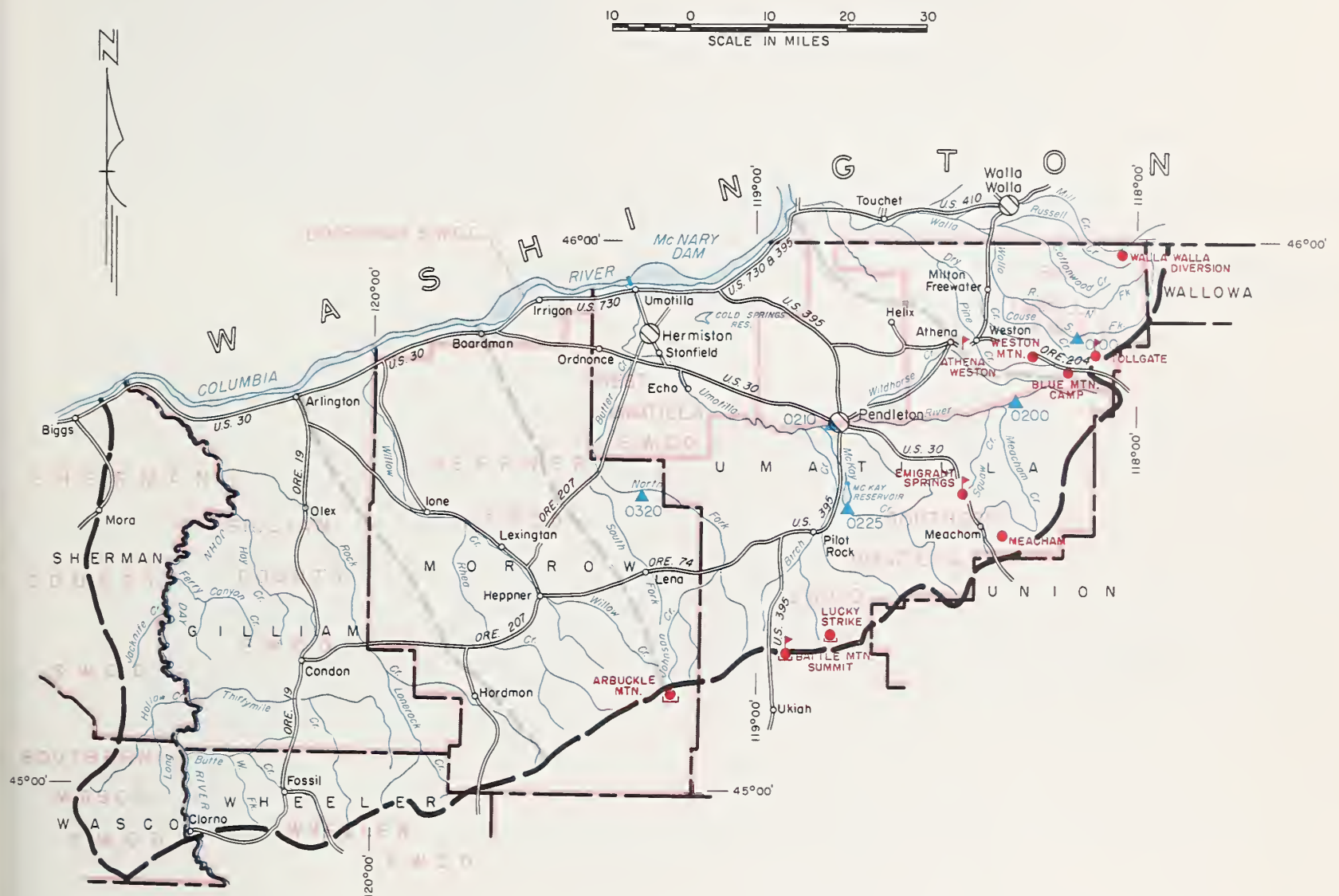
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Athena-Weston	1700	48	18.7	3-29-67	11.4	14.2	14.0
Battle Mountain Summit	4340	48	13.8	3-28-67	13.8	12.9	13.8
Emigrant Springs	3925	48	22.3	3-28-67	20.1	18.3	20.9
Tollgate	5070	48	23.6	3-29-67	18.8	18.3	18.9

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Arbuckle Mountain	5400	3/30	23	8.1	13.9	12.7
Battle Mountain Summit	4340	3/28	2	0.6	0.3	2.2 m
Blue Mountain Camp	4300	3/29	31	9.5	16.2	- -
Emigrant Springs	3925	3/28	1	0.4	5.3	5.1
Lucky Strike	5050	3/28	36	12.3	11.7	14.6 h
Meacham	4300	3/28	21	7.7	9.8	9.5
Tollgate	5070	3/29	65	24.2	26.9	29.9
Walla Walla Diversion	2400	3/27	0	0.0	0.0	0.0 h
Weston Mountain	2700	3/29	7	0.6	0.0	- -

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

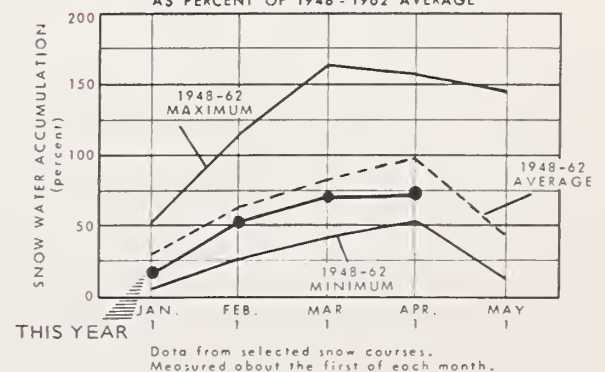



LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- ▶ Soil Moisture Station
- ⊥ Precipitation Gage

SNOW WATER ACCUMULATION IN AREA 3

AS PERCENT OF 1948-1962 AVERAGE





WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

as of
April 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Ranchers and other John Day Basin water users can expect below average water supplies this summer with most areas experiencing late season shortages. March storms brought less than the usual amounts of snow but watershed soils are well wetted and will favor runoff.

SNOW COVER

Water content of the mountain snowpack is about 85 percent of the 15-year average (1948-62) for April first but 15 percent greater than last year. Snow does not usually continue to accumulate after this date except at high elevations. Therefore, the amount of snow-melt water that will be available for streamflow next summer is pretty much known now.

SOIL MOISTURE

Watershed soils under the mountain snowpack are well wetted and contain from 2 to 4 inches more water than last year on this date.

STREAMFLOW

Flow of the John Day at Prairie City is forecast at 40,000 acre feet or 87 percent average for April through July. Flow of the Middle Fork John Day at Ritter is forecast at 104,000 acre feet or 82 percent average for the next four months.

Streamflow in the John Day Basin as measured at Service Creek has been only 62 percent average in February and 58 percent average in March according to the U. S. Geological Survey in Portland. Total flow from October first through March 31st has been only 83 percent of average. Average conditions of temperature and precipitation are assumed for the runoff period.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1967

STREAM or AREA	FLOW PERIOD		RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
	SPRING SEASON	LATE SEASON			THIS YEAR	LAST YEAR	1948-62 AVERAGE
Beech Creek	Fair	Fair					
Beech Creek-Fox-Long Cr.	Fair	Fair					
Bridge-Mountain Creeks	Fair	Fair					
Camas Creek	Fair	Fair					
Cherry Creek	Fair	Fair					
Indian-Pine Creeks	Average	Average					
John Day River, Main Fork	Average	Fair					
John Day River, Mid. Fork	Average	Fair					
John Day River, N. Fork	Average	Fair					
John Day River, S. Fork	Average	Fair					
Monument-Kimberly	Average	Fair					
Strawberry Creek	Average	Average					

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
0385	John Day at Prairie City	40	April-July	46	87
		44	April-Sept.	51	86
0440	John Day, Middle Fork at Ritter	104	April-July	127	82
		107	April-Sept.	131	82
0375	Strawberry near Prairie City	7.7	April-July	8.1	95
		8.4	April-Sept.	8.8	95

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Battle Mountain Summit	4340	48	13.8	3-28-67	13.8	12.9	13.8
Blue Mountain Springs	5900	42	16.9	3-31-67	11.8	8.8	12.3
Blue Mountain Summit	5100	36	16.8	3-30-67	12.3	9.9	15.6
Derr	5670	24	9.0	3-29-67	8.1	8.5	8.9 ^f
Marks Creek	4540	36	14.1	3-27-67	13.6	13.6	13.6
Snow Mountain	6300	48	16.7	3-30-67	15.5	12.3	15.9
Starr Ridge	5150	36	10.6	3-27-67	10.5	9.0	10.4

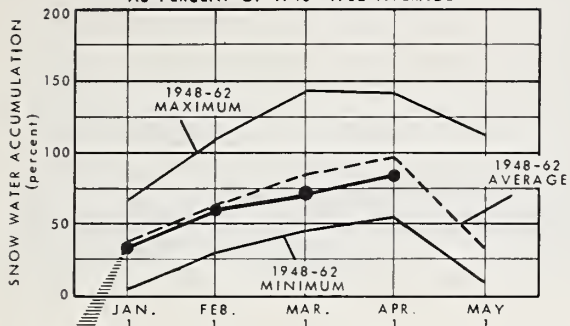
SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Anthony Lake	7125	3/31	86	29.8	23.0	28.9
Arbuckle Mountain	5400	3/30	23	8.1	13.9	12.7
Battle Mtn. Summit	4340	3/28	2	0.6	0.3	2.2 ^m
Beech Creek Summit	4800	3/27	8	3.2	2.9	4.6
Blue Mountain Springs	5900	3/31	54	16.4	10.6	17.3
Blue Mountain Summit	5098	3/30	24	7.4	6.2	8.6
Derr	5670	3/29	30	9.4	10.0	11.0
East Fork Canyon ^e	5700	4/6	30	9.0	- -	- -
Gold Center	5340	3/29	36	11.1	13.2	13.7
Indian Creek Butte ^e	6550	4/6	78	23.4	- -	- -
Izee Summit	5293	3/27	21	7.0	5.4	8.8
Lucky Strike	5050	3/28	36	12.3	11.7	14.6 ^h
Marks Creek	4540	3/27	3	1.5	1.7	2.4
Ochoco Meadows	5200	3/31	34	10.1	8.6	11.6
Olive Lake	6000	3/27	54	18.2	18.0	22.5
Schoolmarm	4775	3/30	13	3.8	5.0	5.2 ^h
Snow Mountain	6300	3/30	47	15.6	10.2	14.7
Starr Ridge	5150	3/27	13	4.2	1.3	5.3
Tipton	5100	3/30	27	9.1	7.2	11.0 ^h
Williams Ranch	4500	^b				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

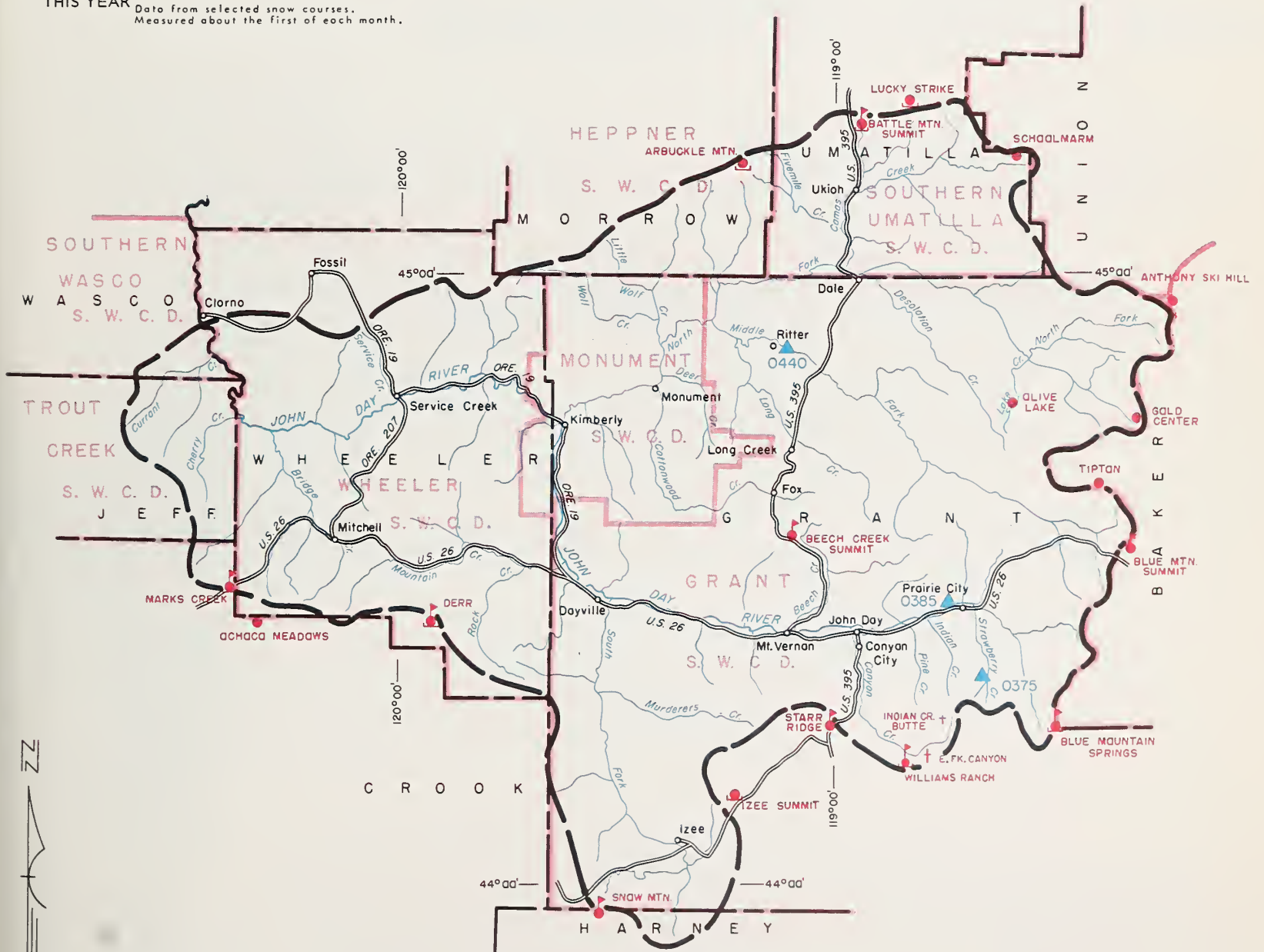
UPPER JOHN DAY WATERSHEDS

SNOW WATER ACCUMULATION IN AREA 4
AS PERCENT OF 1948-1962 AVERAGE



THIS YEAR Data from selected snow courses.
Measured about the first of each month.

10 0 10 20 30
SCALE IN MILES



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Sail Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ▼ Sail Moisture Station
- † Aerial Snow Depth Gage
- ⌋ Precipitation Gage

WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

as of

April 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Ranchers, farmers and other water users of Jefferson, Deschutes and Crook counties can expect slightly below average water supplies next spring and summer with some late season shortages. Stored water supplies are near average and watershed soils are well wetted.

SNOW COVER

Water content of the mountain snowpack in the mid-state watersheds is about 87 percent of the April first 15-year average (1948-62) and about 15 percent greater than last year.

SOIL MOISTURE

Moisture in the soil mantle under the mountain snowpack is excellent and is about 2 inches greater than last year on this date.

RESERVOIR STORAGE

The Crooked River reservoirs, Prineville and Ochoco, now hold 128,200 and 29,000 acre feet respectively. This is about the same stored water supply that was on hand last year.

Deschutes River reservoirs are at lower levels than last year. Crane Prairie now holds 38,800 acre feet compared with 47,000 a.f. last year (this reservoir apparently lost about 2,000 acre feet in the past month). Crescent Lake held 55,250 acre feet on April 1 compared with 63,900 a.f. last year (this reservoir apparently gained only about 1,000 acre feet in March). Wickiup reservoir gained about 25,000 acre feet and now holds 180,600 acre feet compared with 190,000 a year ago.

STREAMFLOW

Forecasts of expected streamflow for April-September 1967 are:

<u>Stream</u>	<u>Volume</u>	<u>Percent Average (1948-62)</u>
Crooked River above Prineville Resv.	137,000 a.f.	110%
Ochoco Resv. net inflow	25,000 a.f.	78%
Little Deschutes near Lapine	90,000 a.f.	80%
Deschutes at Benham Falls	485,000 a.f.	77%
Tumalo Creek	47,000 a.f.	87%
Squaw Creek	50,000 a.f.	89%

These forecasts assume near average conditions of precipitation and temperature during the forecast period.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Arnold Irrigation District	Average	Average
Bear Creek	Average	Average
Beaver Creek	Average	Average
Camp Creek	Average	Average
Central Ore. Irrig. Dist.	Average	Fair
Crooked River	Average	Average
Deschutes River	Average	Fair
Hay-Trout Creeks	Average	Fair
Lone Pine Irrig. Dist.	Average	Average
Mill Creek	Average	Fair
North Unit Irrig. Dist.	Average	Fair
Ochoco Creek	Average	Fair
Sisters Irrigation Dist.	Average	Average
Snow Creek Irrig. Dist.	Average	Fair
Squaw Creek Irrig. Dist.	Average	Average
Swalley Ditch	Average	Average
Tumalo Project	Average	Average
Walker Basin Irrig. Dist.	Average	Average

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Crane Prairie	55.3	38.8	49.4	46.5
Crescent Lake	86.9	55.2	63.9	45.9
Ochoco	47.5	29.0	32.1	32.1
Prineville	153.0	128.2	127.4	- -
Wickiup	200.0	180.6	201.3	188.2

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1967

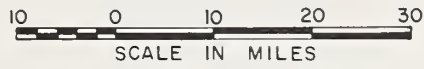
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
0535	Crane Prairie Reservoir total Inflow	88	April-July	94	94
		132	April-Sept.	143	92
0600	Crescent at Crescent Lake ^d	22	April-July	26	85
		26	April-Sept.	33	79
0795	Crooked near Post	135	April-July	123	110
		137	April-Sept.	125	110
0645	Deschutes at Benham Falls ^d	318	April-July	417	76
		485	April-Sept.	631	77
0500	Deschutes below Snow Creek	63	April-Sept.	75	84
0630	Deschutes, Little near Lapine ^d	78	April-July	99	79
		90	April-Sept.	113	80
0848	Ochoco Reservoir net Inflow	25	April-Sept.	32	78
0555	Odell near Crescent	29	April-Sept.	34	85
0750	Squaw near Sisters	50	April-Sept.	56	89
0730	Tumalo near Bend ^d	47	April-Sept.	54	87

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Derr	5670	24	9.0	3-29-67	8.1	8.5	8.9 ^f
Marks Creek	4540	36	14.1	3-27-67	13.6	13.6	13.6
Snow Mountain	6300	48	16.7	3-30-67	15.5	12.3	15.9

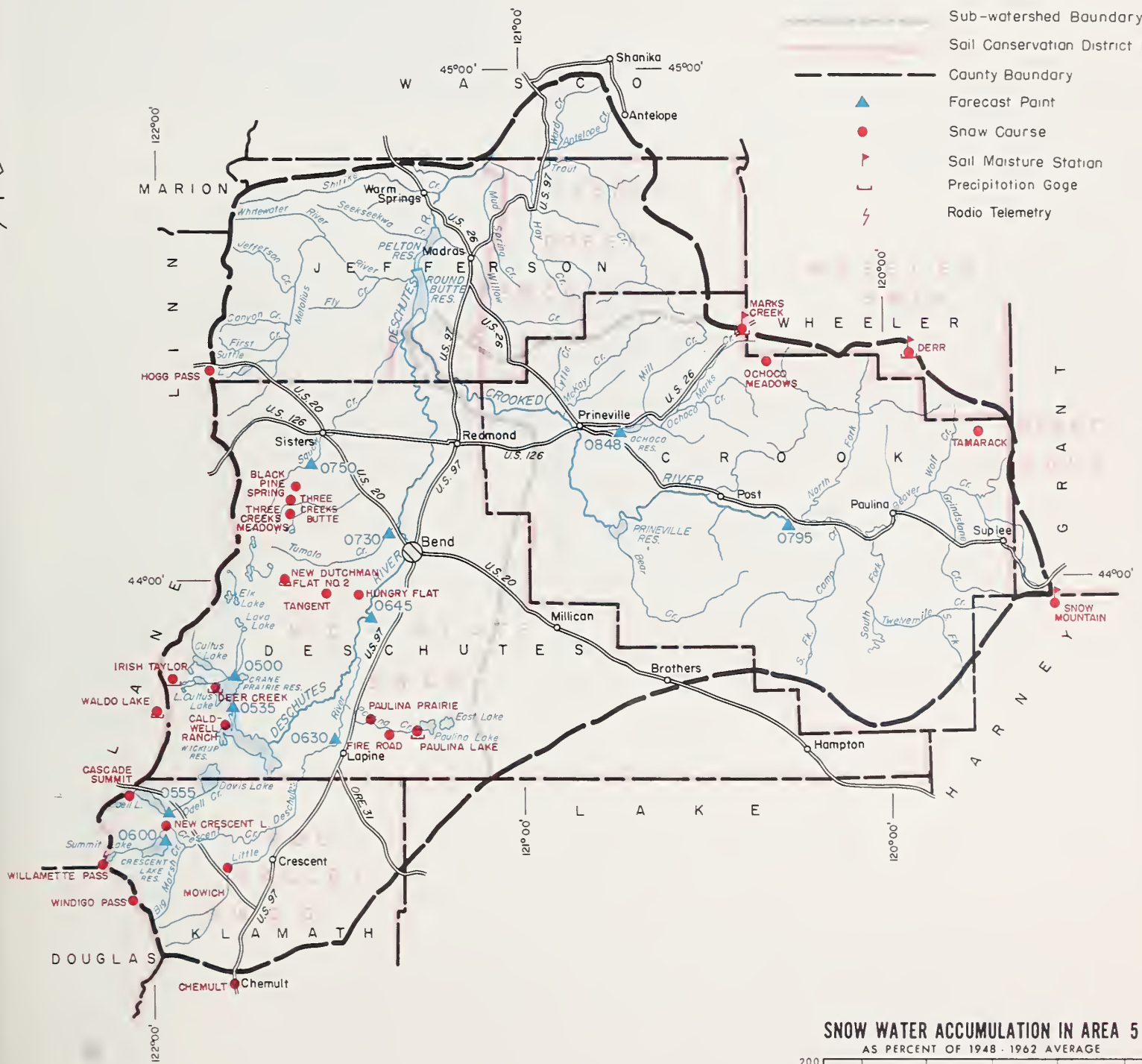
(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

UPPER DESCHUTES, CROOKED WATERSHEDS

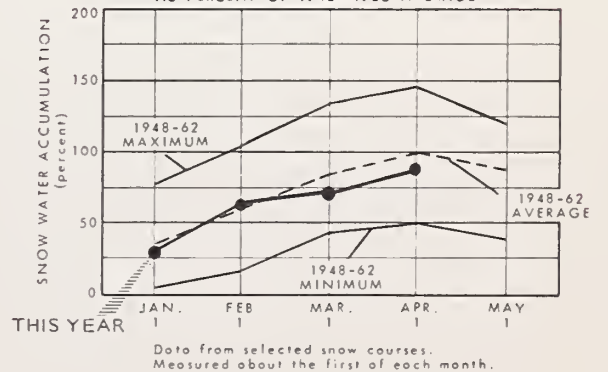


LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - Soil Conservation District Bdry.
- - - County Boundary
- ▲ Forecast Point
- Snow Course
- ▼ Soil Moisture Station
- ⊥ Precipitation Gage
- ⚡ Radio Telemetry



SNOW WATER ACCUMULATION IN AREA 5 AS PERCENT OF 1948-1962 AVERAGE



Upper Deschutes, Crooked Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Black Pine Spring	4600	3/27	0	0.0	0.0	5.2 ^h
Caldwell Ranch	4400	3/29	19	7.8	10.7	11.0
Cascade Summit	4880	3/30	91	29.9	40.8	36.2
Chemult	4760	3/31	30	9.9	12.1	10.5
Deer Creek	4554	3/29	46	16.9	19.7	- -
Derr	5670	3/29	30	9.4	10.0	11.0
Fire Road	5050	3/28	18	6.5	7.7	6.7 ^h
Hogg Pass	4755	3/31	112	41.6	54.4	49.7
Hungry Flat	4400	4/2	T	T	6.9	4.2 ^h
Irish-Taylor	5500	3/29	108	37.8	39.4	44.6 ^h
Marks Creek	4540	3/27	3	1.5	1.7	2.4
Mowich	4700	3/30	14	5.2	4.6	2.9 ^h
New Crescent Lake	4800	3/30	45	15.0	14.9	17.8 ^h
New Dutchman Flat #2	6400	4/2	120	52.6	53.4	57.7
Ochoco Meadows	5200	3/31	34	10.1	8.6	11.6
Paulina Lake	6330	3/28	58	20.7	18.8	22.0 ^h
Paulina Prairie	4285	3/28	0	0.0	0.0	0.3 ^h
Snow Mountain	6300	3/30	47	15.6	10.2	14.7
Tamarack	4800	3/30	13	4.1	2.8	- -
Tangent	5400	4/2	55	20.8	28.2	25.0 ^h
Three Creeks Butte	5200	3/27	15	6.4	10.6	12.9 ^h
Three Creeks Meadows	5650	3/27	42	15.6	22.7	23.6
Waldo Lake	5500	3/28	84	32.7	33.1	35.8 ^h
Willamette Pass	5600	3/30	125	42.7	45.6	46.3 ^h
Windigo Pass	5800	3/31	108	38.4	40.3	48.7

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

OREGON

as of

April 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE

OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Water users in the Hood River-Wasco area can expect only fair water supplies this spring and summer with major streams forecast to flow 73 to 82 percent average in the next six months.

SNOW COVER

Deficient precipitation in both February and March brought less than the usual increases in the mountain snowpacks in the local watersheds. Water content of the snowpack about April first is only 74 percent of the 15-year average (1948-62) and about 30 percent less than last year.

SOIL MOISTURE

Watershed soils in the upper watersheds under the snowpack have been generously recharged this year and will greatly favor runoff from snow-melt.

RESERVOIR STORAGE

Wasco reservoir, also known as Clear Lake, contained 2,600 acre feet of water on April first compared with 1,900 acre feet a year ago.

STREAMFLOW

Flow of White River below Tygh Valley is forecast at 133,000 acre feet or 76 percent of the 15-year average (1948-62) for the six months April through September.

West Fork of Hood River near Dee is forecast at 130,000 acre feet or 73 percent average for the next six months. Flow of Hood River at Hood River is forecast at 312,000 acre feet or 82 percent average.

Smaller streams, many heading in medium or low-elevation watersheds will have relatively short flows this year and will provide only fair water supplies.

These forecasts assume near average conditions of precipitation and temperature will prevail in the forecast periods.

Report prepared by

W.T. FROST AND TOM GEORGE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.
PORTLAND, OREGON 97205

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Aldridge Ditch (Tony Creek)	Fair	Fair
Badger Creek	Fair	Fair
Dee Irrigation District	Fair	Fair
East Fork Irrig. Dist.	Fair	Fair
Farmers Irrigation Dist.	Fair	Fair
Hood River Irrig. Dist.	Fair	Fair
Juniper Flat	Fair	Fair
Middle Fork Irrig. Dist.	Fair	Fair
Mile Creeks	Fair	Fair
Mill Creek	Fair	Fair
Mount Hood Irrig. Dist.	Fair	Fair
Rock-Gate-Threemile Crs.	Fair	Fair
Tygh Creek	Fair	Fair
White River	Fair	Fair

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Clear Lake	11.9	2.6	1.9	--

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1967

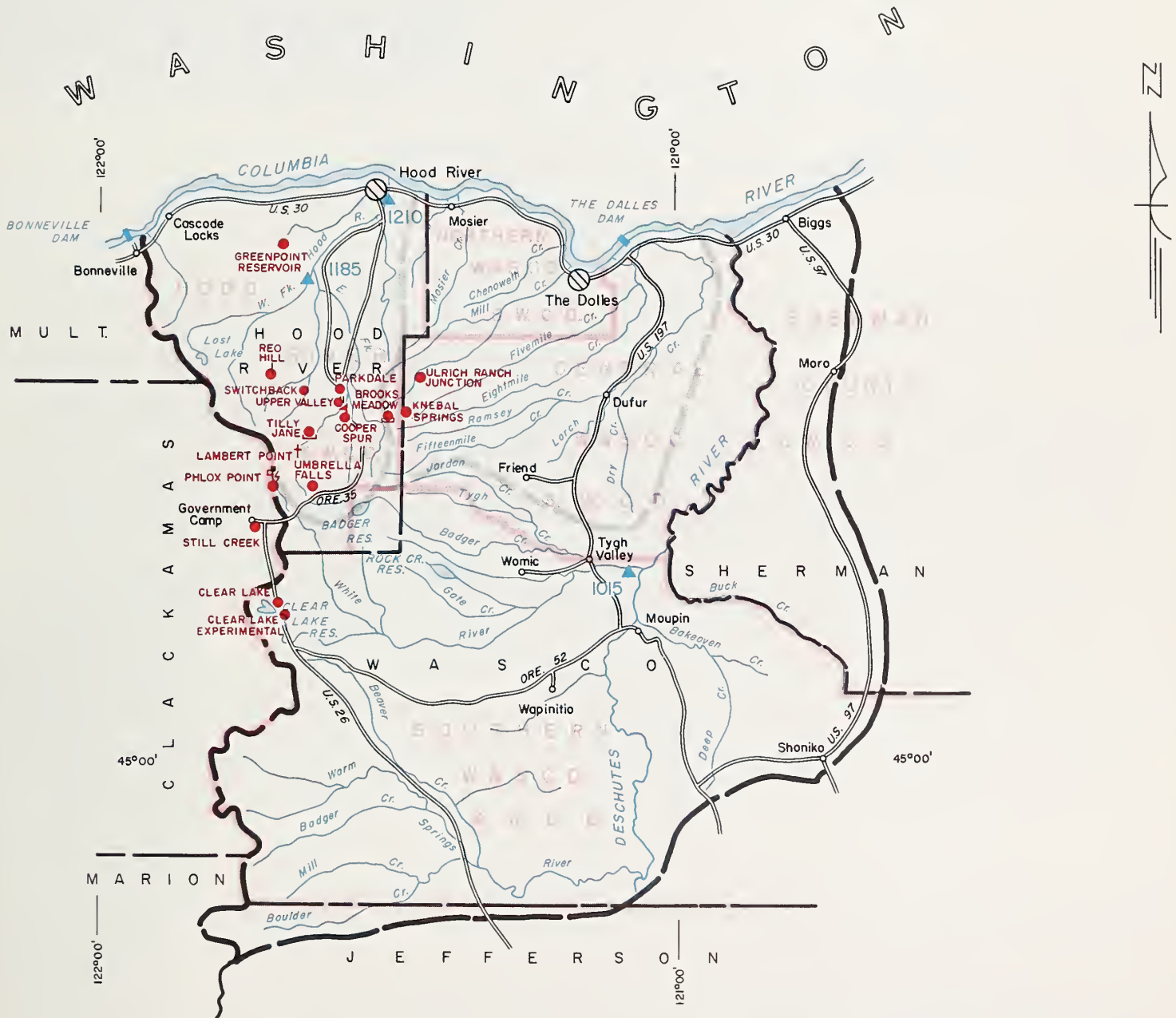
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
1210	Hood near Hood River ^d	262	April-July	322	81
		312	April-Sept.	381	82
1185	Hood, West Fork near Dee	123	April-July	155	79
		130	April-Sept.	179	73
1015	White below Tygh Valley	117	April-July	158	74
		133	April-Sept.	176	76

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Brooks Meadows	4300	3/31	38	11.0	19.5	14.5
Clear Lake	3500	3/30	19	5.8	17.2	14.5
Clear Lake (Experimental)	3500	3/30	41	13.5	24.9	--
Cooper Spur	3490	3/31	23	6.0	14.2	--
Greenpoint Reservoir	3400	3/30	37	13.0	28.3	19.2
Knebal Springs	3850	3/31	16	--	9.6	--
Lambert Point	7000	^b				
Parkdale	1770	3/31	3	0.3	--	--
Phlox Point	5400	3/29	160	61.9	68.4	70.4
Red Hill	4400	3/23	91	30.2	57.5	52.9
Still Creek	3670	3/30	62	21.8	34.1	29.3
Switchback	3255	3/31	37	11.0	25.0	--
Tilly Jane	6000	3/18	98	34.7	60.6	50.1
Ulrich Ranch Junction	3350	3/31	14	--	5.1	--
Umbrella Falls	5400	4/1	166	67.6	77.0	--
Upper Valley	2530	3/31	3	0.3	--	--

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

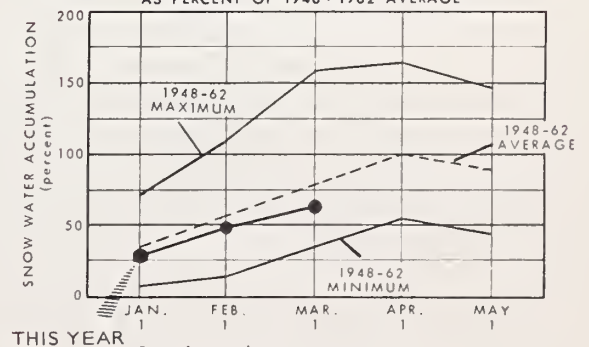


LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- Soil Moisture Station
- Precipitation Gage
- Temperature Gage
- Radio Telemetry

SNOW WATER ACCUMULATION IN AREA 6

AS PERCENT OF 1948-1962 AVERAGE



Data from selected snow courses.
Measured about the first of each month.

WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

as of

April 1, 1967



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Water supply outlook is satisfactory on the major streams of the Columbia Basin for 1967. Streamflow forecasts for the Snake River and its tributaries in Idaho as well as the Yakima in Washington are for near average flows. Streams in Oregon are forecast at slightly below average.

High flows are expected for the Columbia and Kootenai Rivers in Canada. Seasonal volume flows as the river enters the United States may equal or exceed any flow of the past 25 or more years. With near average flows expected from the Snake River and tributaries from the Washington Cascade range, flows of the lower river at The Dalles are forecast at 84,000,000 or 113% April-June and 122,000,000 or 112% April-September, but probably less than in 1948 and 1956.

With the heavy snowpack in the upper basin, there is a possibility that a combination of additional precipitation and unusual temperature sequences could result in relatively high peak stages during the snowmelt season.

SNOW COVER

Snow cover is at a record or near record high on the upper Columbia and Kootenay in Canada and the Flathead in the United States section of the basin. The upper Snake watersheds and streams from the Washington Cascade range have slightly above average snowpack to this date. In Oregon mountain snowpack is below average.

SOIL MOISTURE

Soil moisture tends to be near average at both mountain and valley elevations for this date. Some deficiency is noted for the Continental Divide area in Montana.

STREAMFLOW

The flow of the Columbia River and its tributaries has been below average for over a year except for January 1967. The record by months for the 1967 water year for the Columbia at The Dalles is as follows:

<u>Month</u>	<u>Percent of Average Discharge (1948-62)*</u>
October	79 (Adjusted for storage)
November	80 (Adjusted for storage)
December	96 (Adjusted for storage)
January	109 (Adjusted for storage)
February	88 (Adjusted for storage)
March	80 (Adjusted for storage)

*Preliminary data furnished by Currents Records Center, U. S. Geological Survey, Portland, Oregon.

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
1057	Columbia at The Dalles	84,000 122,000	April-June April-Sept.	74,100 108,500	113 112

HISTORICAL DATA (Columbia River at The Dalles)

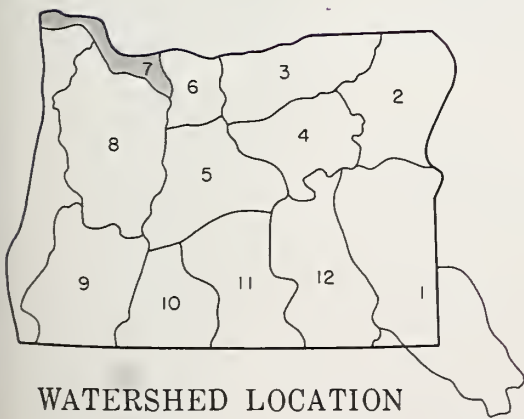
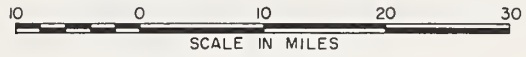
YEAR	STREAMFLOW ^d (1,000 A.F.)			PEAK (1,000 c.f.s.)	DATE
	APR. — SEPT.	APR. — JUNE	MAY — JUNE		
1943	115,000	75,300	52,400	541	June 21
1944	61,900	39,200	32,100	326	June 19
1945	81,600	54,600	47,300	505	June 8
1946	108,100	75,400	59,600	581	May 30
1947	100,300	70,000	56,800	536	May 11
1948	130,500	94,600	81,900	999	May 31
1949	95,700	71,400	56,000	622	May 18
1950	120,400	74,700	61,200	744	June 25
1951	113,000	75,600	59,100	597	May 26
1952	107,700	77,500	57,300	557	May 28
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1948-62 Avg.	108,500	74,100	60,200	633	
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18

LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
		RIVER MILES						
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

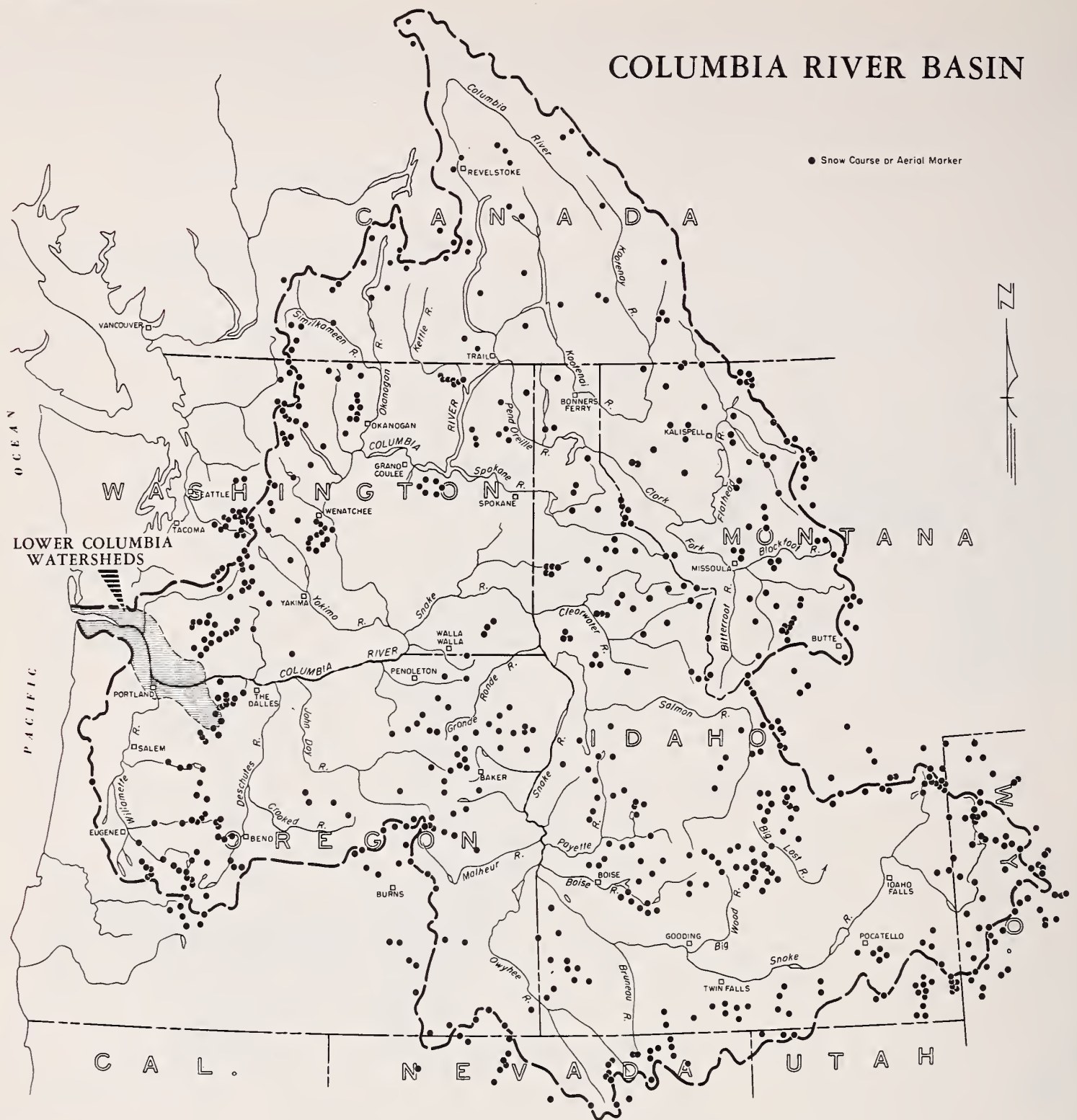
LOWER COLUMBIA WATERSHEDS



LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- 50 River Miles
- Snow Course
- 9 Temperature
- ⚡ Radio Telemetry

COLUMBIA RIVER BASIN





WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

as of

April 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Irrigators and other water users in the Willamette Valley can generally expect slightly below average water supplies this spring and summer. Flow of streams heading in watersheds of medium or low elevations will be a little poorer and will provide only fair water supplies in the late season.

SNOW COVER

Deficient precipitation in both February and March brought smaller than usual increases in the mountain snowpacks. Water content of the snowpack on April first was about 86 percent of the 15-year average (1948-62). Last April there was about 20 percent more snow than there is this year.

SOIL MOISTURE

Soils under the mountain snowpack are well wetted and will favor runoff from snow-melt when it comes.

RESERVOIR STORAGE

Contents of Willamette Valley's multiple purpose reservoirs are very close to the usual levels for this date.

STREAMFLOW

Forecasts of the expected flow of Willamette streams range from 76 to 96 percent of average for the April through September period and are as follows:

<u>Stream</u>	<u>Volume</u>	<u>Percent Average (1948-62)</u>
Clackamas at Estacada	790,000 acre feet	89%
North Santiam at Mehama	817,000 acre feet	82%
South Santiam at Waterloo	515,000 acre feet	76%
McKenzie near Vida	1,155,000 acre feet	83%
Middle Fork Willamette	783,000 acre feet	81%
Row River near Dorena	103,000 acre feet	92%
Willamette at Salem	4,650,000 acre feet	84%

These forecasts assume near average conditions of precipitation and temperature during the forecast period.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1967

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Calapooya	Average	Fair
Clackamas	Average	Average
McKenzie	Average	Average
Molalla	Average	Fair
Santiam, North	Average	Average
Santiam, South	Average	Fair
Willamette, Coast Fork	Average	Average
Willamette, Middle Fork	Average	Average

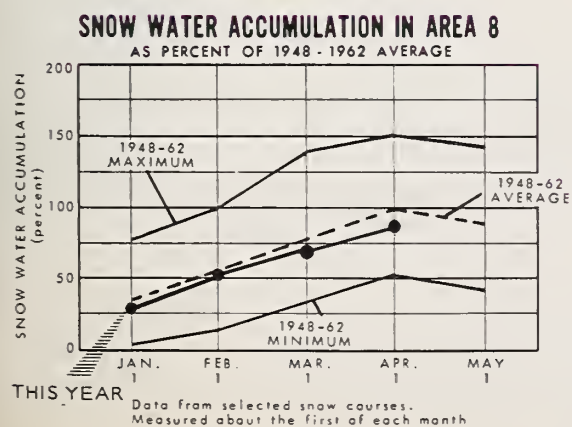
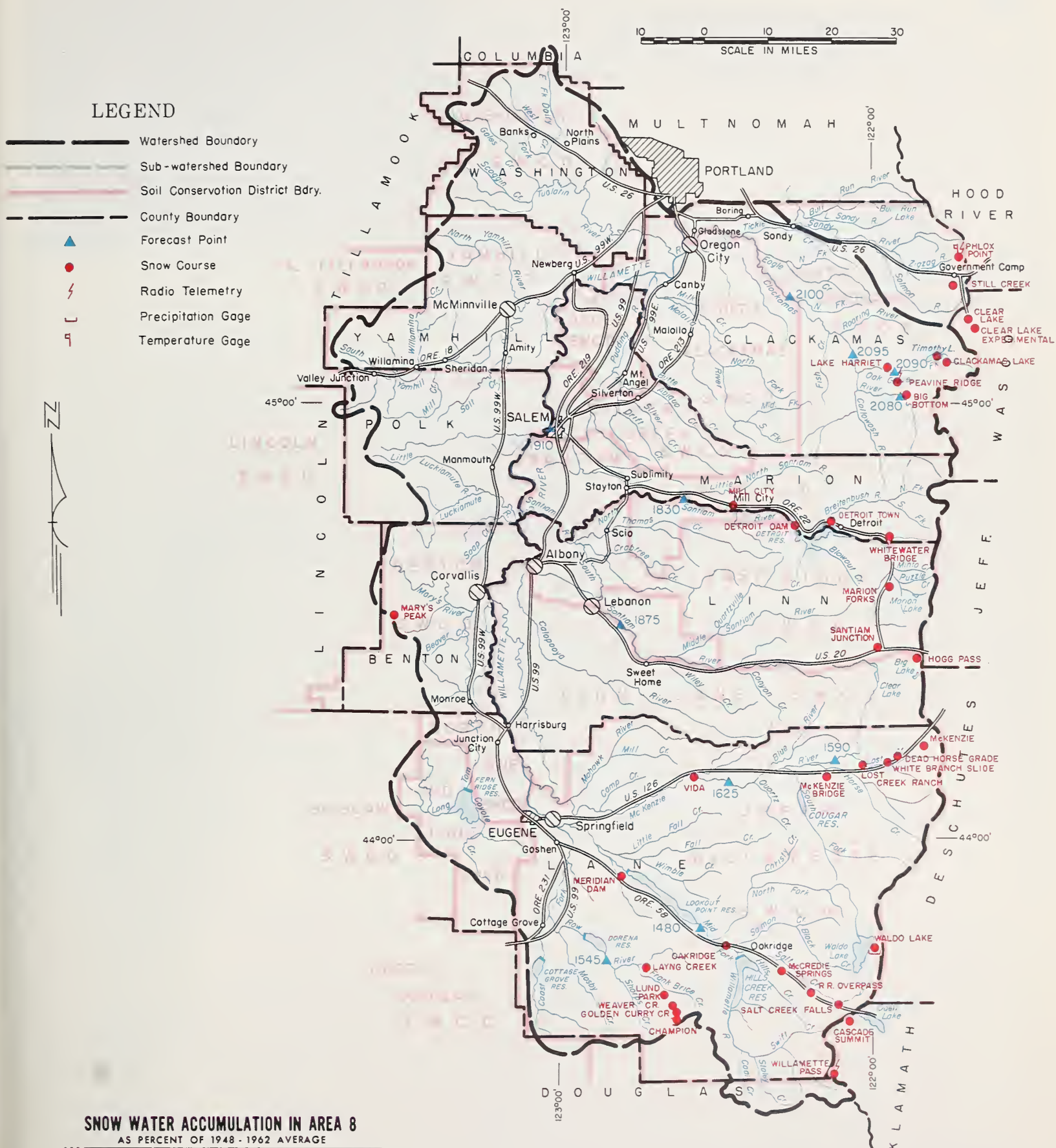
RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cottage Grove	30.0*	16.2	15.8	18.3
Cougar	155.2*	69.5	62.6	- -
Detroit	299.9*	146.6	154.3	173.5 ^m
Dorena	70.5*	35.3	35.1	38.7 ^m
Fall Creek	115.0*	73.6	73.7	- -
Fern Ridge	94.2*	71.0	75.7	67.1
Hills Creek	200.0*	105.8	100.2	- -
Lookout Point	337.2*	143.2	109.9	183.0 ^m
Timothy Lake	61.7	58.1	60.3	46.2 ^m
*Multiple purpose reservoir--space reserved primarily for flood runoff.				

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
2080	Clackamas at Big Bottom	139	April-July	150	93
		170	April-Sept.	184	92
2100	Clackamas at Estacada	690	April-July	770	90
		790	April-Sept.	890	89
2095	Clackamas above Three Lynx	537	April-July	584	92
		632	April-Sept.	683	92
1590	McKenzie at McKenzie Bridge	410	April-July	502	82
		550	April-Sept.	658	84
1625	McKenzie near Vida	945	April-July	1144	83
		1155	April-Sept.	1392	83
2090	Oak Grove Fork above Power Intake	141	April-July	147	96
		182	April-Sept.	190	96
1545	Row near Dorena	98	April-July	108	91
		103	April-Sept.	112	92
1830	Santiam, North at Mehama ^d	725	April-July	884	82
		817	April-Sept.	991	82
1875	Santiam, South at Waterloo	480	April-July	637	75
		515	April-Sept.	675	76
1480	Willamette, Mid. Fk. blw. N. Fk. nr. Oakridge	683	April-July	863	79
		783	April-Sept.	968	81
1910	Willamette at Salem ^d	4120	April-July	5040	82
		4650	April-Sept.	5566	84

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

WILLAMETTE WATERSHEDS



Willamette Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Big Bottom	2118	3/28	T	T	3.8	6.4 ^h
Cascade Summit	4880	3/30	91	29.9	40.8	36.2
Champion	4500	3/31	88	31.8	49.2	33.8
Clackamas Lake	3400	3/29	24	8.5	19.0	15.7
Clear Lake	3500	3/30	19	5.8	17.2	14.5
Clear Lake (Experimental)	3500	3/30	41	13.5	24.9	- -
Dead Horse Grade	3800	3/31	50	20.9	27.9	23.3 ^h
Detroit Town	1610	3/31	0	0.0	0.0	0.0 ^h
Detroit Dam	1580	3/31	0	0.0	0.0	0.0 ^h
Golden Curry Creek	3136	3/31	16	3.0	- -	3.6 ^h
Hogg Pass	4755	3/31	112	41.6	54.4	49.7 ^h
Lake Harriet	2045	b				
Layng Creek	1200	3/31	0	0.0	0.0	0.0 ^m
Lost Creek Ranch	1956	3/31	0	0.0	5.3	1.1 ^h
Lund Park	1740	3/31	0	0.0	0.0	0.0 ^m
Marion Forks	2730	3/31	34	11.8	23.2	16.6
Marys Peak	3620	4/1	47	16.2	28.9	15.4
McCredie Springs	2120	3/30	0	0.0	0.0	0.0 ^h
McKenzie	4800	3/31	108	42.5	51.2	51.3
McKenzie Bridge	1372	3/31	0	0.0	0.0	0.0 ^h
Meridian Dam	750	3/30	0	0.0	0.0	0.0 ^h
Mill City	826	3/31	0	0.0	0.0	0.0 ^m
Oakridge	1310	3/30	0	0.0	0.0	0.0 ^h
Peavine Ridge	3500	3/20	57	20.8	29.2	22.9
Phlox Point	5400	3/29	160	61.9	68.4	70.4
Railroad Overpass	2750	3/30	0	0.0	0.0	2.4 ^h
Salt Creek Falls	4000	3/30	64	20.6	28.1	20.1 ^h
Santiam Junction	3990	3/31	57	21.8	35.8	28.5
Still Creek	3670	3/30	62	21.8	34.1	29.3
Timothy Lake	3295	b				
Vida	800	3/31	0	0.0	0.0	0.0 ^h
Waldo Lake	5500	3/28	84	32.7	33.1	35.8 ^h
Weaver Creek	2440	3/31	0	0.0	0.0	2.1 ^h
White Branch Slide	2800	3/31	15	4.5	14.5	5.6 ^h
Whitewater Bridge	2175	3/31	0	0.0	4.6	4.8 ^h
Willamette Pass	5600	3/30	125	42.7	45.6	46.3 ^h

"The Conservation of Water begins with the Snow Survey"



WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

as of

April 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Water supply prospects for farmers, ranchers and other water users in the Umpqua and Rogue basins ranges from fair to average for the spring and summer of 1967. Water users diverting water directly from streams originating in low and medium elevations can expect only fair supplies.

SNOW COVER

Snow packs increased in near average amounts during March but did not make up for the deficit caused by a dry February. Water content of the mountain snowpack is now about 92 percent of the 15-year average (1948-62) but 20 percent less than last year.

SOIL MOISTURE

Mountain soils beneath the snowpack picked up another inch of water in the 4-foot mantle and are well wetted. This moisture condition will favor runoff from snow-melt.

RESERVOIR STORAGE

Medford Irrigation District now has 9,800 acre feet in the two reservoirs, Fish Lake and Fourmile Lake, compared with 18,400 acre feet last year.

Talent Irrigation District has 89,200 acre feet stored in the three reservoirs, Howard Prairie, Hyatt Prairie and Emigrant Gap, compared with 91,200 acre feet last year.

STREAMFLOW

Forecasts of expected streamflow for 1967 in the April-September period are as follows:

<u>Stream</u>	<u>Volume</u>	<u>Percent Average (1948-62)</u>
North Umpqua below Lemolo Reservoir	148,000 acre feet	80%
Rogue above Prospect	293,000 acre feet	82%
Rogue below South Fork	620,000 acre feet	82%
Rogue at Raygold	799,000 acre feet	80%
Applegate near Copper	144,000 acre feet	101%
Illinois at Kerby	203,000 acre feet	96%

The Grants Pass Irrigation District may need to alternate water in their Highline Canals by about August 25th but it is not likely.

These forecasts assume near average conditions of temperature and precipitation in the forecast period.

continued on next page

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PORTLAND, OREGON 97205

These forecasts are made with the assumption that near average conditions of precipitation and temperature will prevail from this date to the end of the forecast period.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Althouse Creek	Average	Fair
Applegate River, Big	Average	Average
Applegate River, Little	Average	Average
Ashland Creek	Average	Average
Butte Creek, Big	Average	Average
Butte Creek, Little	Average	Average
Cow Creek	Fair	Fair
Deer Creek	Average	Fair
Elk Creek	Average	Fair
Emigrant Creek (abv. Res.)	Average	Average
Evans Creek	Fair	Fair
Gold Hill Irrigation Dist.	Average	Average
Grants Pass Irrig. Dist.	Average	Average
Grave Creek	Fair	Fair
Illinois River, East Fork	Average	Average
Illinois River, West Fork	Average	Average
Jump-off-Joe Creek	Average	Fair
Neil Creek	Average	Average
Red Blanket Creek	Average	Average
Rogue River	Average	Average
Sucker Creek	Average	Fair
Table Rock Irrig. Dist.	Average	Average
Thompson Creek	Average	Fair
Wagner Creek	Average	Average
Williams Creek	Average	Fair

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Emigrant Gap	39.0	38.8	36.9	34.3*
Fish Lake	7.8	**4.3	7.2	5.7
Fourmile Lake	16.1	**5.5	11.2	9.5
Howard Prairie	60.0	37.7	42.5	- -
Hyatt Prairie	16.1	12.7	11.8	9.4
* Average for years of record after reconstruction.				
**March 23rd.				

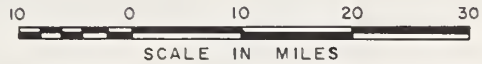
STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
3620	Applegate near Copper	144	April-Sept.	142	101
3145	Clearwater above Trap Creek ^d	63	April-Sept.	75	84
5045	Fourmile Lake net Inflow ^d	6.1	April-Sept.	6.6	92
5140	Hyatt Reservoir net Inflow ^d	5.7	April-Sept.	6.4	89
3770	Illinois River at Kerby	198	April-July	206	96
		203	April-Sept.	212	96
3425	Little Butte, N. Fk. at Fish Lk. nr. Lake Cr. ^d	*	April-Sept.	16.0	
3415	Little Butte, So. Fk. nr. Lake Creek	*	April-July	38	
	Note: Minimum flow will drop to 100 c.f.s. by *.				
3280	Rogue above Prospect	240	April-July	295	81
		293	April-Sept.	355	82
3320	Rogue, South Fork near Prospect ^d	60	April-July	70	86
		70	April-Sept.	82	85
3350	Rogue River below South Fork	510	April-July	611	83
		620	April-Sept.	754	82
3590	Rogue at Raygold near Central Point	655	April-July	837	78
		799	April-Sept.	1001	80
3615	Rogue at Grants Pass	770	April-Sept.	993	78
3135	Umpqua, No. blw. Lemolo Res. nr. Toketee Falls ^d	148	April-Sept.	186	80
	*Snow Survey information at Fish Lake not available.				

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

SNOW WATER ACCUMULATION IN AREA 9

AS PERCENT OF 1948 - 1962 AVERAGE



- OR-9c

Rogue, Umpqua Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Althouse	4530	3/30	25	8.2	28.1	7.2
Annie Spring	6018	3/31	135	50.0	53.3	49.7
Beaver Dam Creek	5100	3/31	43	13.6	16.1	- -
Big Red Mountain	6500	3/28	92	34.1	39.3	32.6
Billie Creek Divide	5300	3/29	68	21.8	19.4	25.4
Caliban	6500	3/30	112	39.0	35.6	- -
Champion	4500	3/31	88	31.8	49.2	33.8
Cold Springs Camp	6100	3/27	85	32.8	36.6	- -
Deadwood Junction	4600	3/31	28	10.3	11.8	- -
Diamond-Crater Summit	5800	3/29	100	34.8	40.0	- -
Diamond Lake	5315	3/29	60	20.0	29.1	26.6
Eden Valley Summit	2390	b				
Fish Lake	4865	b				
Fourmile Lake	6000	3/23	66	26.4	25.6	31.3 ^h
Grayback Peak	6000	3/27	73	29.4	42.3	30.5
Howard Prairie	4500	3/31	29	9.2	10.9	- -
Hyatt Prairie Reservoir	4900	3/31	26	7.6	9.9	9.6 ^h
King Mountain #1	4500	b				
King Mountain #2	4000	b				
King Mountain #3	3648	b				
King Mountain #4	3049	b				
King Mountain #5	2380	b				
King Mountain #6	1820	b				
Little Red Mountain	6500	3/28	74	27.9	35.1	26.3
Mt. Ashland Switchback	6400	3/30	106	36.0	40.7	- -
North Umpqua	4215	3/30	43	15.5	19.8	16.4
Page Mountain	4045	3/30	10	2.6	15.0	4.9 ^h
Park Headquarters	6450	3/31	159	60.7	62.2	62.1
Red Butte #1	4560	3/24	38	19.2	39.3	- -
Red Butte #2	4000	3/24	13	5.2	28.2	- -
Red Butte #3	3500	3/24	0	0.0	20.0	- -
Red Butte #4	3000	3/24	0	0.0	14.2	- -
Red Butte #5	2500	3/24	0	0.0	0.0	- -
Red Butte #6	2000	3/24	0	0.0	0.0	- -
Seven Lakes #1	6800	3/31	158	59.6	60.1	64.3 ^h
Seven Lakes #2	6200	3/30	123	40.8	44.6	47.2
Silver Burn	3720	3/31	39	15.1	21.1	13.9
Siskiyou Summit	4630	b				
Ski Bowl Road	6000	3/30	89	31.8	36.3	- -
South Fork Canal	3500	3/30	0	0.0	T	1.2
Trap Creek	3800	3/30	43	15.9	20.0	11.8 ^h
Whaleback	5140	3/31	95	33.8	43.4	38.6
Windigo Pass	5800	3/31	108	38.4	40.3	48.7

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

as of

April 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Irrigators and other water users in Klamath Basin can expect adequate water supplies this spring and summer. Stored water supplies are about average and soil moisture in the upper watersheds is excellent.

SNOW COVER

Although precipitation during March was about 30 percent greater than normal the mountain snowpacks increased in normal amounts. Overall snow cover in the Klamath Basin now averages 94 percent of the usual April first amount.

SOIL MOISTURE

The top four feet of soil mantle under the snowpacks is well wetted and will favor runoff from snow-melt in the early part of the spring runoff season.

RESERVOIR STORAGE

Stored water supplies are close to average for this date. Clear Lake now holds 219,200 acre feet compared with 241,500 acre feet a year ago. Gerber reservoir holds 61,100 acre feet compared with 68,200 acre feet last year on April first. Storage in Upper Klamath Lake is now 465,400 acre feet which is slightly greater than the amount held a year ago on this date.

STREAMFLOW

Inflow to Upper Klamath Lake was 83 percent average in March and the flow from October 1, 1966 to March 31, 1967 is 88 percent average.

Forecasts of expected streamflow for the April-September period of 1967 are as follows:

<u>Station</u>	<u>Volume</u>	<u>Percent Average (1948-62)</u>
Sprague near Chiloquin	308,000 acre feet	106%
Williamson below Sprague River	490,000 acre feet	100%
Upper Klamath Lake Net Inflow	690,000 acre feet	108%
Clear Lake Reservoir Inflow	48,000 acre feet	100%
Gerber Reservoir Inflow	23,000 acre feet	100%

These forecasts assume near average conditions of precipitation and temperature during the forecast period.

WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1967

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Ft. Klamath Valley	Average	Average
Lost River (Clear Lake)	Average	Average
Lost River (Gerber)	Average	Average
Lost River (Willow Res.)	Average	Average
Sprague River	Average	Average
Upper Klamath Lake	Average	Average
Williamson River	Average	Average

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Clear Lake	440.2	219.2	241.5	235.5
Gerber	94.0	61.1	68.2	49.4
Upper Klamath Lake	584.0	465.4	460.2	461.8

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1967

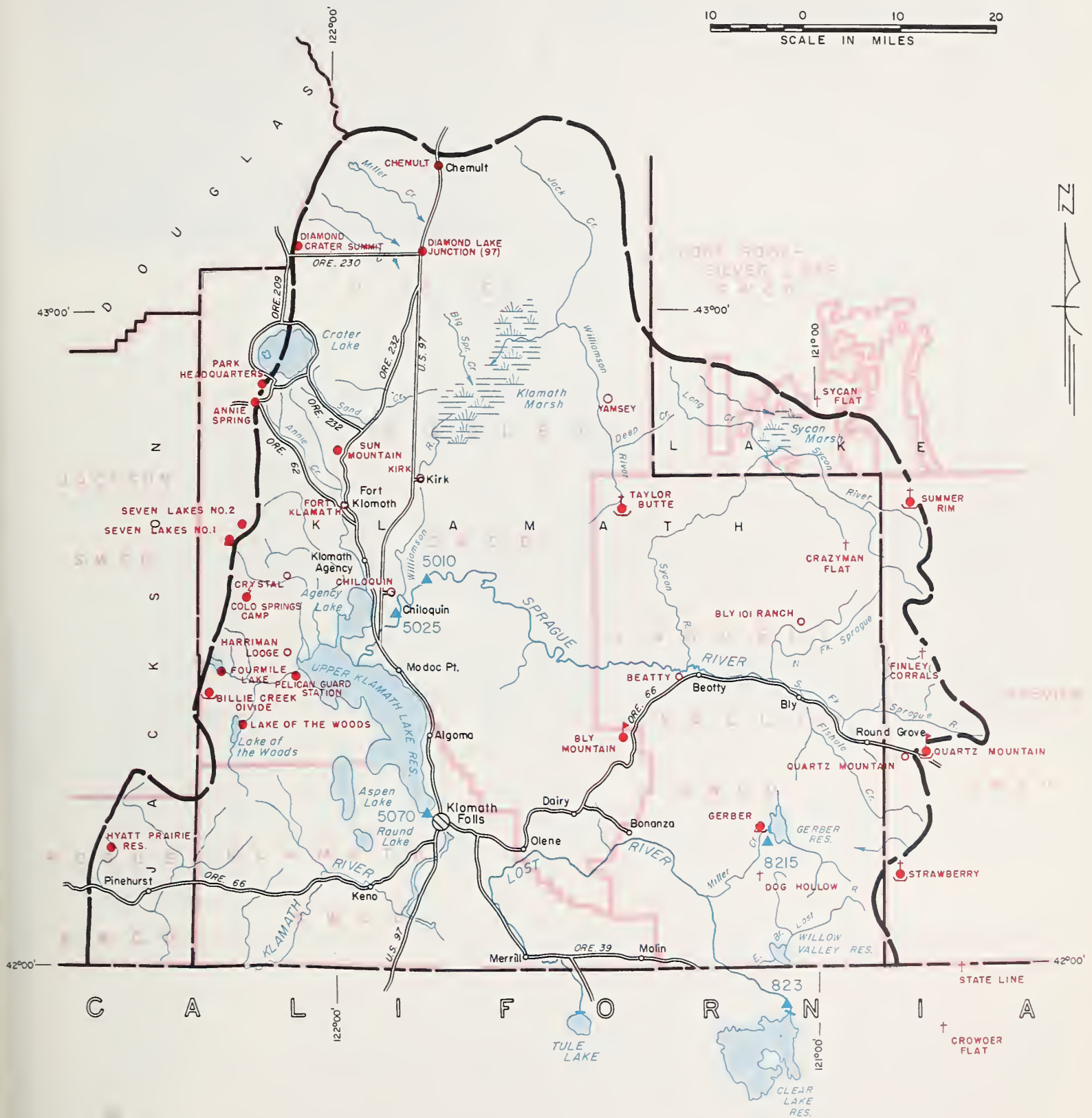
FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
823	Clear Lake Reservoir Inflow ^k	44	April-June	44	100
		48	April-Sept.	48	100
8215	Gerber Reservoir Inflow ^k	22	April-June	22	100
		23	April-Sept.	23	100
5010	Sprague near Chiloquin	266	April-July	256	104
		308	April-Sept.	289	106
5070	Upper Klamath Lake net Inflow ^k	559	April-July	527	106
		690	April-Sept.	639	108
5025	Williamson below Sprague River	409	April-July	413	99
		490	April-Sept.	490	100

SOIL MOISTURE

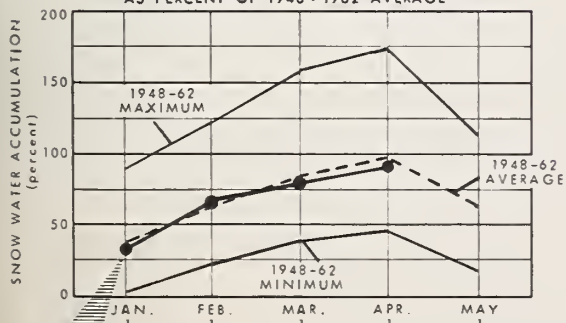
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Bly Mountain	5090	42	14.0	3-28-67	11.7	12.2	12.6

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

KLAMATH WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 10
AS PERCENT OF 1948-1962 AVERAGE



THIS YEAR Data from selected snow courses.
Measured about the first of each month.

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry
- County Boundary
- Forecast Point
- Snow Course
- Aerial Snow Depth Gage
- COPCO Snow Station
- Soil Moisture Station
- Precipitation Gage
- Radio Telemetry

Klamath Watersheds

SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Annie Spring	6018	3/31	135	50.0	53.3	49.7
Beatty (PP&L)	4300	3/31	0	0.0	- -	0.0 ^m
Billie Creek Divide	5300	3/29	68	21.8	19.4	25.4
Bly Mountain	5090	3/28	21	8.1	6.3	3.9 ^m
Bly 101 Ranch (PP&L)	4800	b				
Chemult	4760	3/31	30	9.9	12.1	10.5
Chiloquin (PP&L)	4187	b				
Cold Springs Camp	6100	3/27	85	32.8	36.6	- -
Crazyman Flat ^e	6100	3/27	32	10.2	13.6	10.3 ^m
Crowder Flat ^e (Calif.)	5200	3/27	2	0.7	0.8	0.6 ^m
Crystal (PP&L)	4200	3/31	22	7.8	8.5	7.2
Diamond-Crater Summit	5800	3/29	100	34.8	40.0	- -
Diamond Lake Junction (97)	4600	3/29	12	5.5	7.1	- -
Dog Hollow ^e	4900	3/27	0	0.0	0.0	0.0 ^m
Finley Corrals ^e	6000	3/27	38	12.2	14.4	16.9 ^m
Fort Klamath (PP&L)	4150	3/30	0	0.0	1.9	1.2
Fourmile Lake	6000	3/23	66	26.4	25.6	31.3 ^h
Gerber	4850	b				
Harriman (PP&L)	4200	3/31	0	0.0	1.6	1.1 ^m
Hyatt Prairie Reservoir	4900	3/31	26	7.6	9.9	9.6 ^h
Kirk (PP&L)	4533	b				
Lake of the Woods	4960	3/28	25	7.2	13.8	12.4
Park Headquarters	6450	3/31	159	60.7	62.2	62.1
Pelican Guard Station	4150	3/29	2	0.2	0.0	- -
Quartz Mountain	5320	3/30	24	7.8	6.3	5.7
Quartz Mountain (PP&L)	5504	3/30	32	9.8	8.0	6.1
Seven Lakes #1	6800	3/31	158	59.6	60.1	64.3 ^h
Seven Lakes #2	6200	3/30	123	40.8	44.6	47.2
State Line ^e (Calif.)	5750	3/27	21	7.1	9.4	9.9 ^m
Strawberry	5760	4/3	28	9.4	9.3	8.0
Summer Rim	7200	3/31	63	20.0	16.4	19.6
Sun Mountain	5350	3/28	67	24.7	25.9	28.6
Sycan Flat ^e	5500	3/27	26	8.3	7.8	4.6 ^m
Taylor Butte	5100	3/31	19	6.9	2.0	4.5 ^h
Yamsey (PP&L)	4600	b				

"The Conservation of Water begins with the Snow Survey"

WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

as of

April 1, 1967

U. S. D. A. SOIL CONSERVATION SERVICE

OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Average water supplies are foreseen for ranchers and other water users of Lake County for the summer irrigation. Some shortages will occur for users of Twenty-mile Creek and for streams flowing off of Hart Mountain in the latter part of the season.

SNOW COVER

Water content of the mountain snowpack is about 97 percent of the April first average and a little more than 10 percent greater than a year ago. Precipitation has been well above average for the winter.

SOIL MOISTURE

Moisture in the top four feet of soil mantle on the upper watersheds under the snowpack is now 74 percent of capacity. A year ago these soils were wet only up to 65 percent of capacity. These wet soils will definitely favor snow-melt runoff this season.

RESERVOIR STORAGE

Drews Valley reservoir increased its storage to 39,400 acre feet on March 22 compared with 53,800 acre feet a year ago on April first. Cottonwood reservoir held 2,600 acre feet on the same date and is slightly ahead of last year but below average for this date.

STREAMFLOW

Inflow to Drews Reservoir is forecast at 37,000 acre feet or 106 percent average for the April-July period. The Chewaucan river is forecast at 90,000 acre feet or 114 percent average for the period April through June.

Warner Valley streams will probably be a little below average in their flow April through June. Deep Creek is forecast at 66,000 acre feet or 97 percent average; Honey Creek is forecast at 15,600 acre feet or 100 percent; and Twenty-mile is forecast at 18,000 acre feet or 86 percent average.

These forecasts assume near average conditions of precipitation and temperature during the forecast periods.

Report prepared by

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1218 S.W. WASHINGTON ST.
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WATER SUPPLY OUTLOOK

expressed as "Poor", "Fair",
"Average" or "Excellent"

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1967

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Chewaucan	Average	Average
Crooked Creek	Average	Average
Deep Creek	Average	Average
Dry Creek	Average	Fair
East Side Goose Lake	Average	Fair
Guano Lake	Fair	Fair
Honey Creek	Average	Fair
Lakeview Water Users Assn.	Average	Average
Rock Creek (Hart Mtn.)	Fair	Fair
Silver-Buck Creeks	Average	Average
Summer Lake	Average	Average
Thomas Creek	Average	Average
Twentymile Creek	Average	Fair
Warner Lakes	Average	Fair

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE
Cottonwood	8.7	** 2.6	2.1	4.7*
Drews	63.0	**39.4	53.8	44.1
Thompson Valley	17.4	13.7	- -	- -
*Average for years of record after reconstruction.				
**Measured March 22, 1967.				

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT OF AVERAGE ⁱ
NO.	NAME				
3840	Chewaucan near Paisley	90	April-June	79	114
		100	April-Sept.	88	114
3715	Deep above Adel	66	April-June	68	97
		70	April-Sept.	72	97
3385	Drews Reservoir net Inflow ^d	37	April-July	35	106
		40	April-Sept.	35	114
3785	Honey near Plush	15.6	April-June	15.6	100
		16.1	April-Sept.	16.1	100
3660	Twentymile near Adel	18	April-June	21	86
		19	April-Sept.	22	86

SOIL MOISTURE

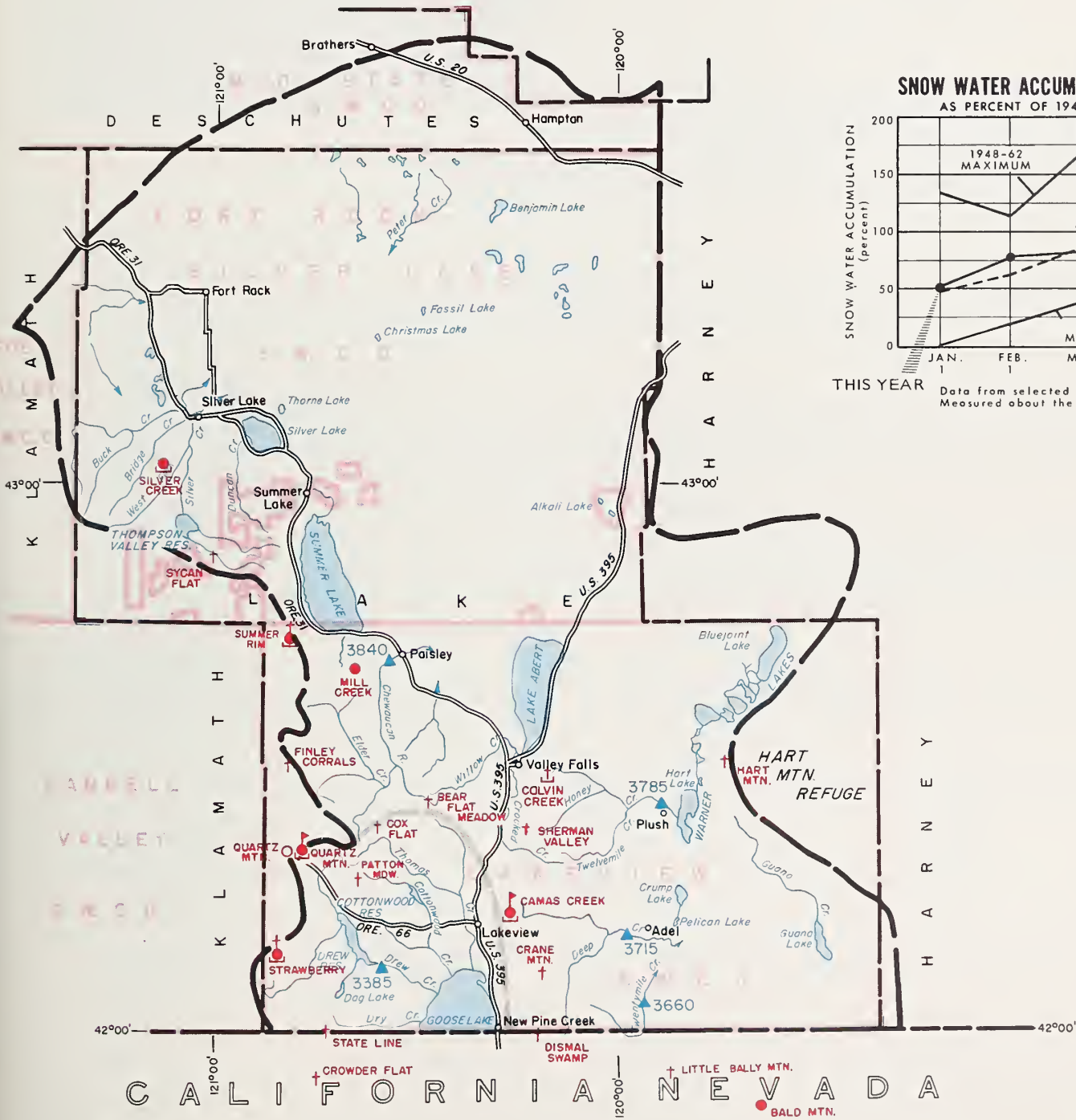
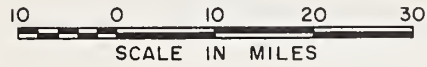
STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Camas Creek	5720	42	14.5	3-31-67	12.8	12.0	13.2
Quartz Mountain	5320	48	15.3	3-30-67	9.3	7.5	10.6

SNOW

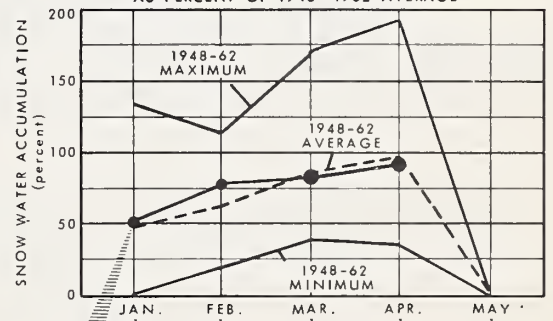
SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Adin Mountain (Calif.)	6350	3/30	43	16.7	10.4	14.0
Bald Mountain (Nev.)	6720	3/28	8	2.6	0.3	3.8
Bear Flat Meadow ^e	5900	3/27	36	11.5	12.9	12.6 ^m
Camas Creek	5720	3/31	37	10.1	7.8	12.0
Cedar Pass (Calif.)	7100	3/30	48	13.8	12.2	17.0
Colvin Creek ^e	6550	3/27	21	6.7	8.2	- -
Cox Flat ^e	5750	3/27	22	7.0	9.4	6.4 ^m
Crane Mountain ^e	6020	3/27	2	0.6	0.0	5.2 ^m
Crowder Flat ^e (Calif.)	5200	3/27	2	0.7	0.8	0.6 ^m
Dismal Swampe	7000	3/27	52	16.6	13.7	20.6 ^m
Finley Corralse	6000	3/27	38	12.2	14.4	16.9 ^m
Hart Mountain ^e	6350	3/27	1	0.3	0.8	1.2 ^m
Little Bally Mountaine (Nev.)	6600	3/27	0	0.0	1.8	- -
Mill Creek	6200	3/30	31	10.3	6.5	9.7
Patton Meadows ^e	6800	3/27	50	16.0	17.2	- -
Quartz Mountain (PP&L)	5504	3/30	32	9.8	8.0	6.1
Quartz Mountain	5320	3/30	24	7.8	6.3	5.7
Sherman Valley ^e	6600	3/27	37	11.8	12.5	13.4 ^m
Silver Creek	4900	3/31	6	1.9	0.0	1.4
State Line ^e (Calif.)	5750	3/27	21	7.1	9.4	9.9 ^m
Strawberry	5760	4/3	28	9.4	9.3	8.0
Summer Rim	7200	3/31	63	20.2	16.4	19.6
Sycan Flat ^e	5500	3/27	26	8.3	7.8	4.6 ^m

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

LAKE COUNTY, GOOSE LAKE WATERSHEDS



SNOW WATER ACCUMULATION IN AREA 11
AS PERCENT OF 1948 - 1962 AVERAGE



THIS YEAR Data from selected snow courses.
Measured about the first of each month.

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- COPCO Snow Station
- Sail Moisture Station
- Precipitation Gage

WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

as of

April 1, 1967



U. S. D. A. SOIL CONSERVATION SERVICE
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

GENERAL OUTLOOK

Harney Basin ranchers and other water users can expect average water supplies for this spring and summer with some shortages occurring later on in the season in the north half of the county.

SNOW COVER

Most of the mountain snow courses received substantial increases during March except those at Delintment Lake, Izee Summit and Starr Ridge. The snow cover for all of Harney Basin is 99% of average.

SOIL MOISTURE

Soil moisture conditions are excellent with stations in the area containing from one to 3 inches of water more than a year ago at this time. This factor will enhance runoff conditions.

STREAMFLOW

Forecasts of expected streamflow in the April-September period of 1967 are as follows:

<u>Station</u>	<u>Volume</u>	<u>Percent of 1948-62 Average</u>
Silvies R. nr. Burns	75,000	76%
Silver Creek nr. Riley	19,000	86%
Donner und Blitzen R.	72,000	116%
Trout Creek nr. Denio	10,000	119%

These forecasts assume near average temperatures and precipitation will occur during the forecast period.

WATER SUPPLY OUTLOOK expressed as "Poor", "Fair", "Average" or "Excellent"

STREAM or AREA	FLOW PERIOD	
	SPRING SEASON	LATE SEASON
Catlow Valley	Average	Fair
Cow Creek	Average	Fair
Donner und Blitzen River	Excellent	Average
Mill-Coffeepot Creeks	Average	Fair
Rattlesnake Creek	Average	Fair
Silver Creek	Average	Fair
Silvies River	Average	Fair
Soldier-Prather Creek	Average	Fair
Trout Creek	Excellent	Average
Whitehorse Creek	Average	Fair

RESERVOIR STORAGE (1,000 Ac. Ft.) April 1, 1967

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1948-62 AVERAGE

STREAMFLOW FORECASTS^a(1,000 Ac. Ft.) as of April 1, 1967

FORECAST POINT		FORECAST THIS YEAR	FORECAST PERIOD	1948-62 AVERAGE	THIS YEAR AS PERCENT. OF AVERAGE ⁱ
NO.	NAME				
3960	Donner und Blitzen near Frenchglen	60	April-June	52	115
		72	April-Sept.	62	116
4030	Silver near Riley	19	April-July	22	86
3935	Silvies near Burns	73	April-June	96	76
		75	April-Sept.	99	76
4065	Trout near Denio	9.0	April-June	7.4	122
		10.0	April-Sept.	8.4	119

SOIL MOISTURE

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
		DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
NAME	ELEVATION						
Blue Mountain Springs	5900	42	16.9	3-31-67	11.8	8.8	12.3
Fish Creek	7900	48	15.0	<i>b</i>			
Folly Farm	4450	30	12.5	<i>b</i>			
Silvies	6900	48	16.4	4-1-67	14.5	11.6	13.4
Snow Mountain	6300	48	16.7	3-30-67	15.5	12.3	15.9
Starr Ridge	5150	36	10.6	3-27-67	10.5	9.0	10.4
Stinking Water Summit	4800	48	21.9	<i>b</i>			
Willow-Bald	5000	24	6.6	3-30-67	6.5	3.8 ^f	6.5

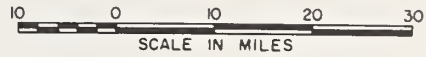
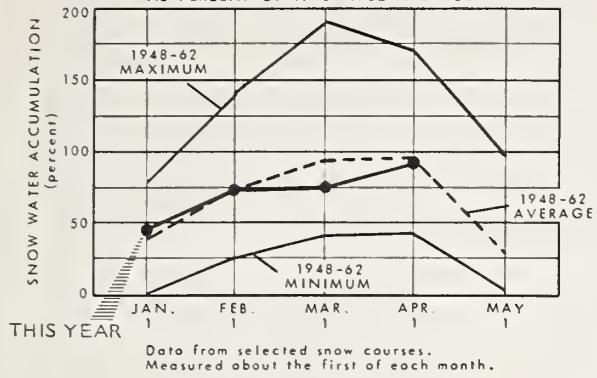
SNOW

SNOW COURSE		CURRENT INFORMATION			PAST RECORD	
		DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	
NAME	ELEVATION				LAST YEAR	1948-62 AVERAGE
Blue Mountain Springs	5900	3/31	54	16.4	10.6	17.3
Buck Pasture ^e	5700	<i>b</i>				
Buckskin Lake ^e	5200	<i>b</i>				
Call Meadows ^e	5340	<i>b</i>				
Crow Camp ^e	5500	<i>b</i>				
Delintment Lake	5600	3/30	24	7.0	5.9	9.0 ^h
Denio Creek ^e	6000	<i>b</i>				
Disaster Peak (Nev.)	6500	3/29	30	10.6	2.4	11.7 ^h
Emigrant Butte	5000	3/30	8	3.4	0.0	2.4 ^h
Fish Creek	7900	4/3	74	26.6	17.9	26.9
Hart Mountain ^e	6350	3/27	1	0.3	0.8	1.2 ^m
Idlewild Camp	5200	3/31	27	7.8	3.5	5.2
Izee Summit	5293	3/27	21	7.0	5.4	8.8
Lake Creek	5120	3/31	36	10.1	6.5	11.2
Martin Creek (Nev.)	6700	3/27	33	12.3	7.0	8.8
Oregon Canyon ^e	6950	<i>b</i>				
Rock Spring	5100	3/31	21	5.0	4.4	5.2
Silvies	6900	4/1	43	16.4	7.5	14.0
Snow Mountain	6300	3/30	47	15.6	10.2	14.7
Starr Ridge	5150	3/27	13	4.2	1.3	5.3
Stinking Water	4800	3/30	T	T	0.0	0.9 ^h
Trout Creek ^e	7800	<i>b</i>				
"V" Lake ^e	6600	<i>b</i>				










(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1948-62 adjusted average. (i) 1948-62, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

HARNEY BASIN WATERSHEDS

SNOW WATER ACCUMULATION IN AREA 12 AS PERCENT OF 1948 - 1962 AVERAGE



LEGEND

-
-  Watershed Boundary
 Sub-watershed Boundary
 Soil Conservation District Bdry.
 County Boundary
 Forecast Point
 Snow Course
 Aerial Snow Depth Gage
 Soil Moisture Station
 Precipitation Gage

WASHINGTON

OREGON

CALIFORNIA

LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Snow Course
- PPBL Snow Station

Scale in Miles

0 20 40 60

Watersheds and Snow Courses:

- Umatilla River**
 - 1902P Arbuckle Mountain 33 4S 29E 54
 - 1801Lm Athena-Weston Summit 21 4N 35E 17
 - 18012MP Battle Mountain Summit 29 38 31E 43
 - 18024H Emigrant Springs 29 11W 35E 39
 - 1806P Lucky Strike 28 3S 32E 50
 - 1805 Weacham 24 2S 1S 35E 43
 - 1803M Tollgate 32 4N 38E 50
 - 18013 Walla Walla Diversion 22 6N 39E 28
- Walla Walla River**
 - 18016 Blue Mountain Camp 35 4N 37E 17
 - 1803M Tollgate 32 4N 38E 50
 - 18017 Weston Mountain 25 4N 35E 27
- Willow Creek**
 - 1902F Arbuckle Mountain 33 4S 29E 54
 - 1801F Anthony Lake 18 7S 37E 73

Other Watersheds and Snow Courses:

- Columbia River**
 - 2101R River 2102R River
 - 2103R River 2104R River
 - 2105R River 2106R River
 - 2107R River 2108R River
 - 2109R River 2110R River
 - 2111R River 2112R River
 - 2113R River 2114R River
 - 2115R River 2116R River
 - 2117R River 2118R River
 - 2119R River 2120R River
 - 2121R River 2122R River
 - 2123R River 2124R River
 - 2125R River 2126R River
 - 2127R River 2128R River
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 - 2231R River 2232R River
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 - 2241R River 2242R River
 - 2243R River 2244R River
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 - 2251R River 2252R River
 - 2253R River 2254R River
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 - 2257R River 2258R River
 - 2259R River 2260R River
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 - 2271R River 2272R River
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 - 2277R River 2278R River
 - 2279R River 2280R River
 - 2281R River 2282R River
 - 2283R River 2284R River
 - 2285R River 2286R River
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 - 2289R River 2290R River
 - 2291R River 2292R River
 - 2293R River 2294R River
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 - 2341R River 2342R River
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 - 2349R River 2350R River
 - 2351R River 2352R River
 - 2353R River 2354R River
 - 2355R River 2356R River
 - 2357R River 2358R River
 - 2359R River 2360R River
 - 2361R River 2362R River
 - 2363R River 2364R River
 - 2365R River 2366R River
 - 2367R River 2368R River
 - 2369R River 2370R River
 - 2371R River 2372R River
 - 2373R River 2374R River
 - 2375R River 2376R River
 - 2377R River 2378R River
 - 2379R River 2380R River
 - 2381R River 2382R River
 - 2383R River 2384R River
 - 2385R River 2386R River
 - 2387R River 2388R River
 - 2389R River 2390R River
 - 2391R River 2392R River
 - 2393R River 2394R River
 - 2395R River 2396R River
 - 2397R River 2398R River
 - 2399R River 2400R River

U S DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE USDA SC5-FORILAND, OREG 1865 M-1874

The Following Organizations Cooperate in the Oregon Snow Survey Work

STATE

- Idaho Cooperative Snow Surveys
- Nevada Cooperative Snow Surveys
- Oregon State University
- Oregon State Engineer and Corps of State Watermasters
- Oregon State Highway Engineers
- Soil and Water Conservation Districts of Oregon

COUNTY

- Douglas County Water Resources Survey

FEDERAL

- Department of Agriculture
 - Cooperative Extension Service
 - Forest Service
 - Soil Conservation Service
- Department of Commerce
 - Weather Bureau
- Department of the Interior
 - Bonneville Power Administration
 - Bureau of Land Management
 - Bureau of Reclamation
 - Fish and Wildlife Service
 - Geological Survey
 - National Park Service
- Department of National Defense
 - Corps of Army Engineers

PUBLIC UTILITIES

- Pacific Power and Light Company
- Portland General Electric Company
- California-Pacific Utilities Company

MUNICIPALITIES

- City of Baker
- City of La Grande
- City of The Dalles
- City of Walla Walla

IRRIGATION DISTRICTS

- Arnold Irrigation District
- Associated Ditch Companies
- Burnt River Irrigation District
- Central Oregon Irrigation District
- East Fork Irrigation District
- Grants Pass Irrigation District
- Hood River Irrigation District
- Jordan Valley Irrigation District
- Juniper Flat Irrigation District
- Lakeview Water Users, Incorporated
- Medford Irrigation District
- Middle Fork Irrigation District
- North Board of Control - Owyhee Project
- North Unit Irrigation District
- Ochoco Irrigation District
- Rogue River Valley Irrigation District
- South Board of Control - Owyhee Project
- Squaw Creek Irrigation District
- Talent Irrigation District
- Tumalo Project
- Vale-Oregon Irrigation District
- Warm Springs Irrigation District

PRIVATE ORGANIZATIONS

- Amalgamated Sugar Company
- The Crag Rats, Hood River, Oregon

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
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Furnishes the basic data
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water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

*"The Conservation of Water begins
with the Snow Survey"*